

AC  
EXCLUSIVE!

**CEI Discusses Possible U.S. Amiga Buyout.**

# Amazing

COMPUTING™

Your Original AMIGA® Monthly Resource

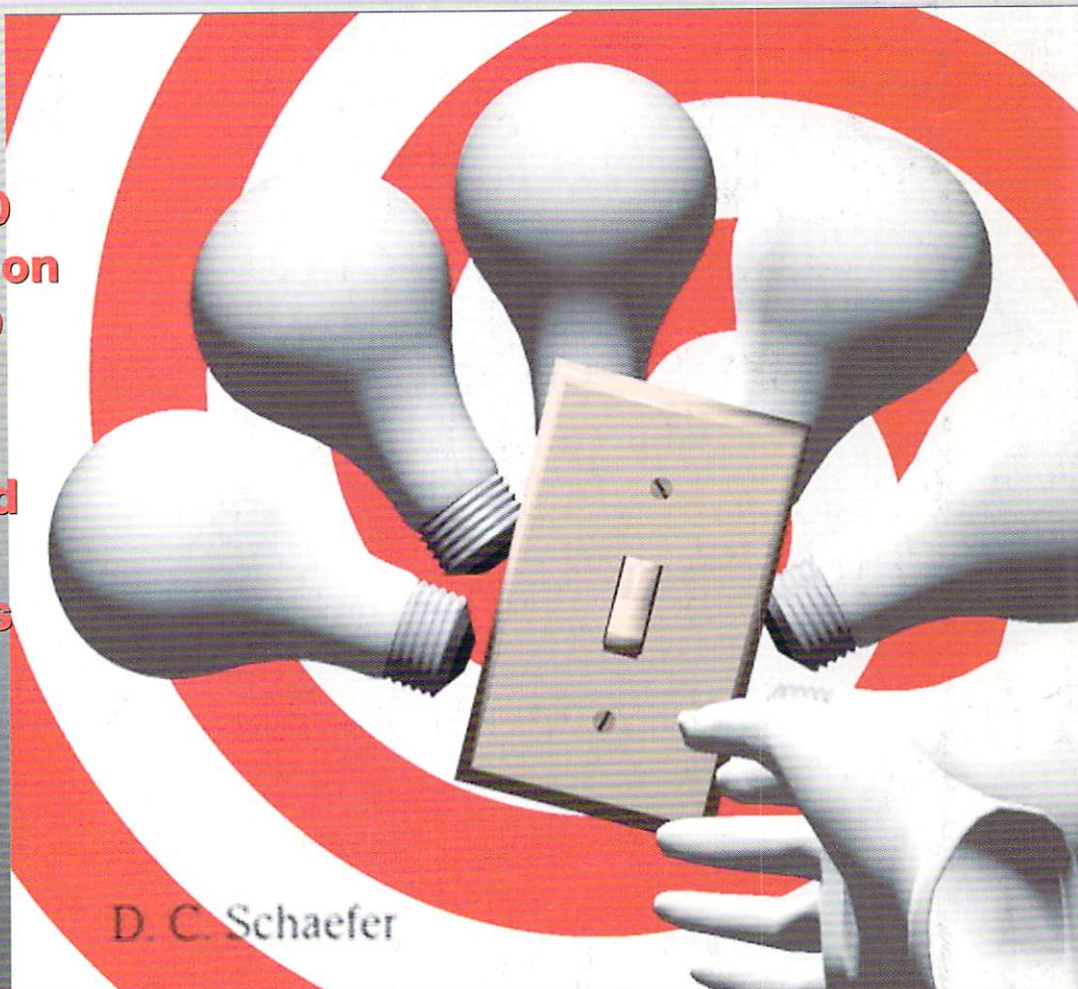
For The Commodore

# AMIGA®

Volume 9 No. 10 October 1994  
US \$3.95 Canada \$4.95

## Amiga lights up the way

- VideoStage Pro
- IMAGINE 3.0
- DesktopMAGIC
- MaxonMAGIC 2.0
- Lens Flare creation with Aladdin 4-D
- Create your own custom texture backgrounds and texture maps
- Video Transitions using ARexx
- BoomBox and much more!



D. C. Schaefer

**NBC Promo uses the Amiga.**

**Fractal Gallery**

• Fractal Pro

• Mand2000

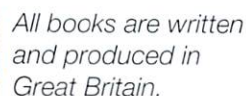
P. 30



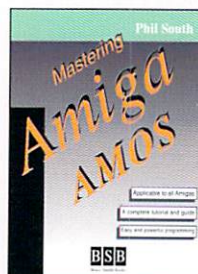
10



*"Top quality guidance for Amiga users"*



**BSB**  
*Bruce Smith Books*



Mastering

Paul Overaa

# Amiga Assembler

Applicable to all Amigas

The complete disk-based tutorial

Write your own programs

Free Disk

BSB

**Paul Overman**

*Mastering*

# Amiga System

Applicable to all Amiga

The complete tutorial guide

Write your own programs

**Free Disk**

**BSB**

Paul Overmars

# A

## Amiga assembler

INVISIBLE  
guide  
SERIES

Free Disk

Assembly code on a screen

Amiga assembler is the first in a series of books that will help you learn to program in assembly language. The book is written for the Amiga 500 and Amiga 504. It covers the basics of assembly language, including instructions, registers, and addressing modes. It also includes a chapter on the Amiga's hardware, such as the video and audio chips. The book is written in a clear and concise style, making it easy to read and understand. It is a must-have for anyone who wants to learn to program in assembly language on the Amiga.

**Mastering**

**Tutorial**

**Amiga  
DOS 3**

Covers 2 and 3.1 (and 3.2)

Complete Beginner's Tutorial

Covers all AGA Anaglas

**Free Disk**

**ESB**

Reference

Mastering

# AmigaDOS 3

AmigaDOS 3.1 and 3.2

Complete Command Coverage

Mark Smiley's #1 Guide

**BSR**

**Paul Overman**

# A miga

## disks and drives

**New book**

**Tuning guide series**

**Free Disk**

Amiga disks and drives are trademarks of Commodore International Inc. © 1989 Commodore International Inc. All rights reserved.

Mastering

# Amiga Beginners

Applicable to all Amigans

complete beginners course

Your entry to new software gems

**BPS**

**Free Disk**

**Mastering** Paul Overaa

# Amiga ARexx

**Free Disk**

- Application to all Amigas
- Powerful Programming/Shell Case
- Excellent Tutorial and Guide

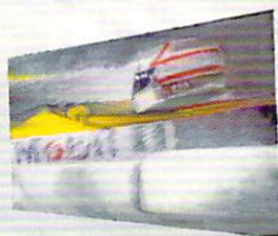
**BSB**

[illegible]

**CREDIT CARD HOTLINE**  
**(800) 345-3360**

Signed ..... Expiration Date: ...../...../.....





# *ImageFX*<sup>2.0</sup>

*"When Your Image Is On The Line"*

ImageFX is the only image processing software package you will ever need for your Amiga...Period. This phenomenal program comes with a complete array of professional 24-bit paint tools and unsurpassed special effects. When you're up against a deadline, you don't have time to second guess. ImageFX gives you total control of the creative process with the fastest and easiest to use interface on the market.

When your image is on the line, you can't afford to make a mistake. Your image processor has to have all the tools an image processor should have. ImageFX lets you see your images as you work on them. Provides virtual memory for virtually unlimited image

sizes. Supports framegrabbers and scanners. Paints in full color, even emulating traditional media such as charcoals and watercolors. Supports dozens of image file formats. Other packages? They either can't do it, or you'll pay extra to get it. They stand still while ImageFX continues to grow and improve. Dramatically.

ImageFX 2.0 sets a new standard of quality for graphics manipulation on the Amiga. When your image is on the line, don't settle for less. Step up to the best. Step up to ImageFX 2.0.

For a complete list of features in ImageFX 2.0 call the Nova Design support line at (804) 282-6528.



**NOVA DESIGN, INC.**

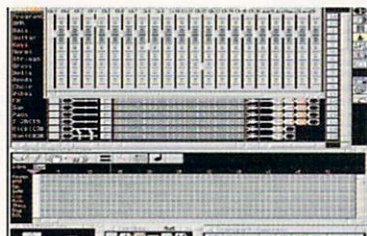
1910 Byrd Avenue, Suite 214 • Richmond, VA 23060  
Customer Support: (804) 282-6528 • Business Line: (804) 282-5868 • Fax: (804) 282-3768





Cover rendering by  
Dennis Schaefer

## CONTENTS



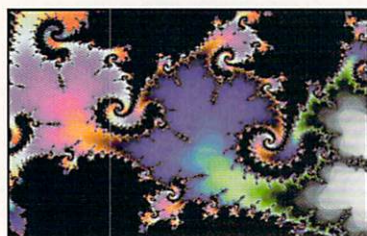
Bars & Pipes 2.5 Upgrade, p.15



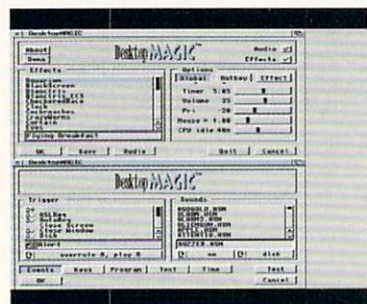
VideoStage Pro, p.23



IMAGINE 3.0, p.25



Fractal Gallery, p.30



DesktopMAGIC, p.36

### In This Issue

#### 15 Bars & Pipes Professional 2.5 Upgrade

by Rick Manasa

In what is billed a major upgrade to this popular MIDI sequencer this review covers many of the new and improved features.

#### 19 AC EXCLUSIVE! Alex Amor

Creative Equipment International's President speaks out on his plans for purchasing the Amiga.

#### 23 VideoStage Pro

by Douglas J. Nakakihara

A review of Oxix's new multimedia authoring system for creating interactive and non-interactive presentations.

#### 25 IMAGINE 3.0

by Marc Hoffman

From complete 68040 chip support to a completely revised manual, read all about the exciting changes that have taken place since its first release over two years ago.

#### 30 Fractal Gallery

by D. L. Richardson

Great Fractal pictures plus an overview of *Fractal Pro* by MegageM and Cygnus Software's *Mand2000* software packages.

#### 36 DesktopMAGIC: The Kitchen Sink Screensaver

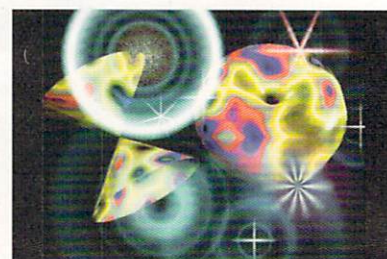
by Douglas Nakakihara

Great interface design and the ability to trigger audio clips place this program a step up from the rest.

#### 38 MaxonMAGIC

by Henning Vahlenkamp

A review covering both the pros and the cons of this latest Amiga screen saving utility.



#### 47 Aladdin-4D Tutorial #10

by Shamms Mortier

Lens flare creation and use are covered in depth in this month's Aladdin-4D tutorial.

#### 62 Video Transitions using ARexx

by Jason R. Hardy

Combine the power of ARexx scripting with Art Department Professional to create video transitions.

#### 65 Two for the Fun of it

by Shamms Mortier

BoomBox and Mand2000 are two programs that will give you hours of enjoyment.

#### 76 Show Reports

by Douglas J. Nakakihara

Digital World, InfoComm, and ShowBiz Expos.

The Amiga still had a presence, albeit minor, at two of the shows.

### Features

#### 50 Online

by Rob Hays

This month we shift gears and look at some of the software available on the services we have covered so far.

#### 55 Digital Image Special F/X

by William Frawley

Custom textures, backgrounds and texture maps made easy with your favorite image processing and 3D animation software.



# AC Exclusive!

Creative Equipment International's President, Alex Amor, speaks out on his plans for purchasing the Amiga.

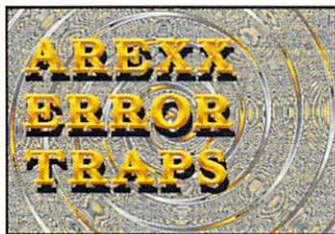
p.19



New Products , p.10



Digital Image Special F/X, p.55



Inside ARExx, p.42



Two for the Fun of it, p.65



Diversions, p.74

## Columns

### 10 New Products & Other Neat Stuff

Play Inc. - Digital Creations, Progressive Image Technology, and eight senior staff members from NewTek have joined forces to create the next major desktop video provider plus upgrades from Playfield; new releases from Replica Technology, and more.

### 28 Bug Bytes

by John Steiner

Audiomaster IV and the A4000; 1960 Monitor driver revisited; Slow spin problems with A4000 Hard Drives; Multiple Hard Drives and the A3000; Chinon High Density Drives and the A4000; and more comments on WB 2.1 and Floppy Drives round out this month's Bug Bytes.

### 42 Inside ARExx

by Merrill Callaway

Programming Error Traps and Interrupting ARExx Programs.

### 45 Cli directory

by Keith Cameron

Several readers react to past columns and a Script file that will search a Disk for a given topic or word.

### 67 Roomers

by The Bandito

Alternative platforms, and other things Amiga users should avoid..

### 74 Diversions

This month: *Mortal Kombat* from Virgin Interactive / Acclaim Entertainment, the product that helped spawn recent concerns about overly violent video games has finally kicked, punched and bled its way onto the Amiga. *Mortal Kombat* pits the player against a plethora of on-screen opponents, but if you are a concerned parent with young children, *Mortal Kombat*, may be too gory for your taste.

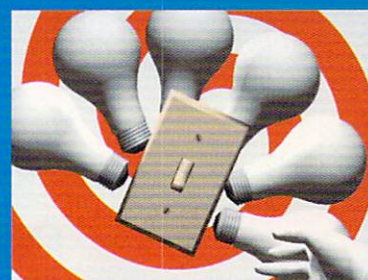
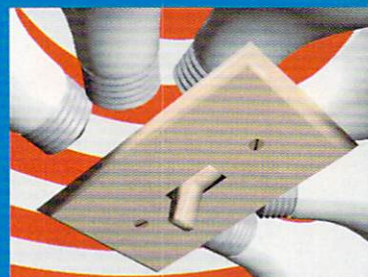
## Departments

Editorial .....6

Feedback.....52

List of Advertisers .....72

### And furthermore...



Video Artist, Dennis Schaefer and his Amiga created an enlightening visual effect for his company, NBC



# What's Wrong? Are the 24-Bit Graphic cards missing something? We Think So!!!

## The TALON

~~699.95~~

~~599.95~~

~~499.95~~

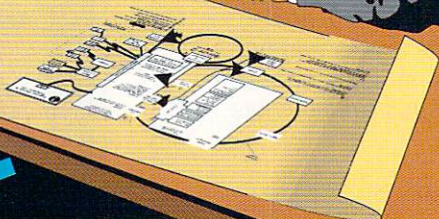
New  
Price

### Main Objectives

Lowest Cost  
Video Option  
Retargetable Graphics  
FCC Approved  
Paint Program  
Zorro II & III  
64-Bit Display Controller  
Multimonitor Support

EGS  
Workbench Emulation  
Programmable resolution

97p



50240 W. Pontiac Trail  
Wixom, Michigan 48393

Tech Support (810) 960-8750  
Sales (810) 960-8751  
Fax (810) 960-8752

## The Eagle is taking Flight!!!

Circle 125 on Reader Service card.

### MOVING?

Keep your Amazing Computing Issues coming!  
Update your address toll-free in the United States or Canada by calling  
**1-800-345-3360.**

Or send your old and new address to: AC, PIM Publications, Inc.,  
P.O. Box 2140,  
Fall River, MA 02722.

# Amazing / AMIGA

Amazing Computing  
For The Commodore AMIGA™

### ADMINISTRATION

Publisher: Joyce Hicks  
Assistant Publisher: Robert J. Hicks  
Administrative Asst.: Donna Viveiros  
Circulation Manager: Doris Gamble  
Asst. Circulation: Traci Desmarais  
Traffic Manager: Robert Gamble  
Production Manager: Ernest P. Viveiros

### EDITORIAL

Managing Editor: Don Hicks  
Hardware Editor: Ernest P. Viveiros Sr.  
Video Consultant: Oran Sands  
Art Consultant: Perry Kivolowitz  
Illustrator: Brian Fox  
Contributing Editor: Merrill Callaway  
Contributing Editor: Shamms Mortier

### ADVERTISING

Coordinator: Donna Viveiros  
Coordinator: Traci Desmarais

### AMAZING AUTHORS

Keith Cameron Randy Finch  
William Frawley Rob Hays  
Jeff James John Steiner  
Dan Weiss Henning Vahlenkamp  
The Bandito

1-508-678-4200, 1-800-345-3360  
FAX 1-508-675-6002

Amazing Computing For The Commodore Amiga™  
(ISSN 1053-4547) is published monthly by PIM Publications, Inc., Currant Road, P.O. Box 2140, Fall River, MA 02722-2140, Phone 1-508-678-4200, 1-800-345-3360, and FAX 1-508-675-6002.

U.S. subscription rate is \$29.95 for one year. Subscriptions outside the U.S. are as follows: Canada & Mexico \$38.95 (U.S. funds) one year only; Foreign Surface \$49.97. All payments must be in U.S. funds on a U.S. bank. Due to erratic postal changes, all foreign rates are one-year only.

Second-Class Postage paid at Fall River, MA 02722 and additional mailing offices.

**POSTMASTER:** Send address changes to PIM Publications Inc., P.O. Box 2140, Fall River, MA 02722-2140. Printed in the U.S.A. Entire contents copyright© 1994 by PIM Publications, Inc. All rights reserved. No part of this publication may be reproduced without written permission from PIM Publications, Inc..

Additional First Class or Air Mail rates available upon request. PIM Publications, Inc. maintains the right to refuse any advertising.

PIM Publications Inc. is not obligated to return unsolicited materials. All requested returns must be received with a self-addressed stamped mailer.

Send article submissions in both manuscript and disk format with your name, address, telephone, and Social Security Number on each to the Associate Editor. Requests for Author's Guides should be directed to the address listed above.

AMIGA™ is a registered trademark of Commodore-Amiga, Inc., Commodore Business Machines, International

Amazing Computing is Distributed in the U.S. & Canada by International Periodical Distributors 674 Via de la Valle, Ste 204, Solana Beach, CA 92075 &

Ingram Periodicals Inc. 1226 Heil Quaker Blvd., La Verne TN 37086

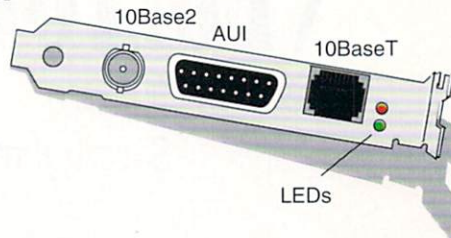
Printed in U.S.A.



# ETHERNET PLUS

## FEATURES INCLUDE:

- 3 Network Interfaces
  - 10BaseT
  - Thick AUI
  - Cheapernet (10Base2)
- Diagnostic LEDs
- 10MB /second
- SANA II Compliant
- 1 Year Warranty

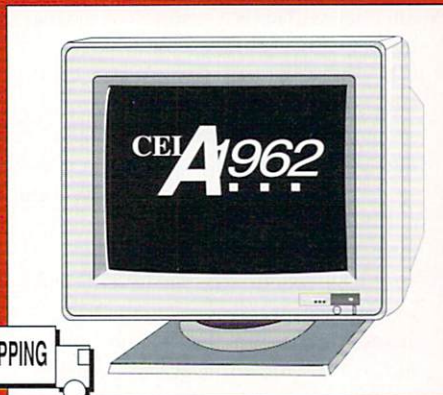


**CEI A4066**  
Ethernet PLUS Network Board



**CEI A1962**

The new high performance multisync monitor... *for all Amigas.*



## THE BEST AMIGA MONITOR EVER! FEATURES:

- 15 to 38 Khz Horizontal Scan Rate
- .28 Dot Pitch
- 45 to 100 Hz Vertical Scan Rate
- International Power Supply Auto Sensing
- Compliant with Low Radiation Standards
- Position & Size Frontal Adjustments
- Swivel Base
- Displays All Amiga Modes Including "Super 72"
- Color Matches the AMIGA 4000

See them at your  
CEI Dealer today...



For the location  
of your nearest  
CEI Dealer  
call 305 266-2800

\* Test comparison with the Commodore A2065 Ethernet Board.  
A4066, EthernetPlus and A1962 are registered trademarks of Creative Equipment International.

Circle 102 on Reader Service card.



# EDITORIAL CONTENT

## Straight Talk

### Facts? What Facts?

In the current turmoil caused by the rapid exit of Commodore and the still unresolved issue of the next owner of the Amiga technology, no one has all the answers. I continue to answer calls from Amiga vendors, Amazing writers, as well as individuals from other industries who begin by talking about one thing or the other and end up asking if I have heard anything. Generally these tend to be one way calls where I quickly summarize the available facts as we know them.

Whenever I am forced to tell someone something that I have not personally been able to verify, I either tell them my source or I tell them it is third or fourth party information and should be treated as such. If someone has given me information that must be held in confidence, I don't repeat it. After all, an incorrect word or a statement released too soon could cause serious problems in getting this entire situation resolved.

I am often upset when I learn that individuals are spreading information that is untrue or at least not the whole truth. The errors appear mostly on the 'nets' where one individual has some knowledge and then fills in the missing pieces with what he believes is the correct assumption. This assumption mysteriously becomes a truth. This results in a series of messages going back and forth on the net. As the messages get farther from the original source, the facts are less likely to have survived in their original format. The result is that many people are being misled and an entirely false impression of the market is being created.

Last month we carried an interview with Mr. David Pleasance, the General Manager of Commodore UK. This caused several discussions on the nets which, of course, we are always glad to see. However, these discussions quickly created the illusion that Mr. Pleasance and his management group had made the deal and that the Amiga was theirs. Within

days, it was a 'fact' that the Amiga had been sold and that word would be made officially "any day now."

Part of this was wishful thinking and part of it was inadequate information. Although several people placed excerpts of the article on-line, the condensed versions of the article lost portions of the central information. In some cases this added to the misinformation going through the marketplace. This resulted in many people believing that the *Amazing Computing* article had stated that Mr. Pleasance was the new owner. This was something we had taken great care not to do.

### Getting the Facts

Our editorial policy concerning interviews is very straight forward. This is not NBC's *Meet The Press* or CNN's *Crossfire*. We are not interviewing people to create controversy or to initiate a situation in order to 'trip-up' the interviewee. This is a serious look at what the individual has to say and what they believe. For accuracy, the interviews are taped, transcribed, edited, and then shown to the interviewee to be certain they are being properly quoted.

While in Mr. Pleasance case, we were not able to send him a copy of the interview before press time, we did inform him of our pressing deadline and we obtained an agreement to run the article based on my conversation with him. For this reason, we were extremely careful to accurately present Mr. Pleasance's case.

However, this accuracy as well as some of the more subtle points were lost when someone decided to place a condensed version of the article on the net. It not only did a disservice to Mr. Pleasance and AC, but also to the thousands of people in the Amiga marketplace. When this was compounded by people who read and respond to the net remarks and did not bother to read

the entire three pages in their copy of AC, a great deal of misinformation was passed down as truth when it did not need to occur.

I would like to request that all of us remain extremely careful of the information we receive and disseminate concerning the Amiga. It is important to the marketplace that we deal as truthfully as possible with all of the problems and concerns of our industry.

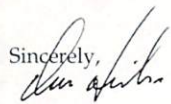
### CEI and Alex Amor

It is in this spirit that this issue carries an interview with CEI President, Alex Amor. Mr. Amor heads a U.S. buyout team attempting to acquire the Amiga technology. Mr. Amor offers different insights into what he believes is important to the Amiga market and what he wants to have happen.

Please read the interview and discuss it among friends on the net and elsewhere. I only ask that if someone offers you a solid statement that the Amiga has been sold to company X, ask them where they heard the announcement.

### The Gateway Computer Show

One way you can show your continued support for the Amiga is by attending the Gateway Amiga Club's annual Show to be held October 29th in St. Louis (see their ad on page 54). This user group event is probably the only Amiga computer event this year (unless the new owners, whoever they are, decide to do something sooner) and it is a great way to meet people who share your interests.

Sincerely,  
  
Don Hicks  
Managing Editor



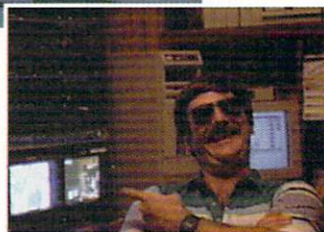
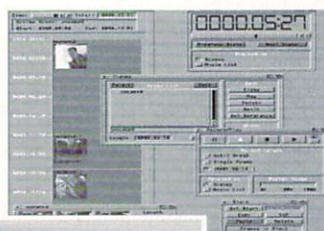
# Vlab Motion

**fully  
functional  
non-linear  
editor and  
real time  
24-bit  
animation  
recorder**

- Broadcast quality non-linear editor
- 16 bit audio with the Toccata
- Complete ARexx support
- Comprehensive digital effects
- Digital character generator
- Chroma keying for "Blue Box" effects
- Composite & Y/C input & output
- Freely adjustable data rates
- Optional transcoder for component in/output
- Powerful, easy-to-use MovieShop software features time line & hierarchical editing
- Optional Toaster® interface
- \$1750 for VLab Motion or \$2150 with the Toccata

"VLab Motion rivals professional equipment which costs \$50,000+. Before your product, I would spend hours and hours of very expensive edit suite time doing single frame editing. With VLab Motion, I can set up an entire 3D animation with digital effects and double-check my work in super-clean 30fps video thanks to MovieShop software. Now I finish in approximately 20 minutes every time I go into an editing suite saving well more than the price of the system. I look to the future of this product with great enthusiasm. I am very impressed with VLab Motion in total . . . **This is the future of video editing.**"

— Robert Van Valen ("Video Bob")  
CBS TV Multiple Award-Winning Animator



All product names are  
trademarks of their respective  
companies.

## Noah Ji's

Also distributing Retina Z-III, Retina Z-II, VLab Y/C, and Toccata 16.

3591 Nyland Way • Lafayette, CO 80026

Voice: 303.499.1975

Fax: 499.1979 • Tech: 433.7031 • BBS: 969.8967

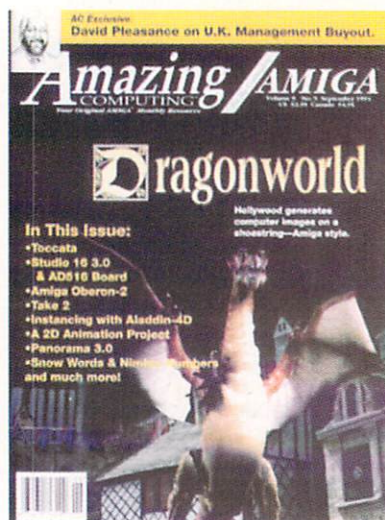


# Maintain your edge...

AC's *Guide* gives you the latest in Amiga products and availability; now subscribe to the magazines that will keep you in the know.

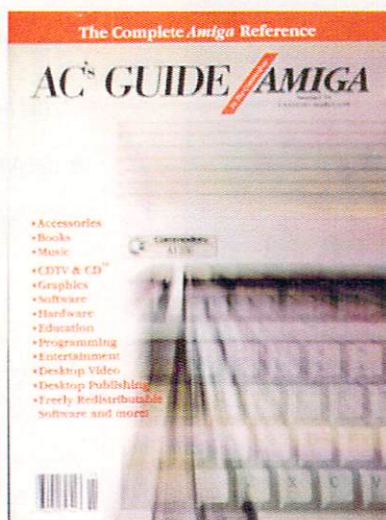
Subscribe to the best resource available for the AMIGA

## Amazing Computing



*Amazing Computing*, the first Amiga monthly magazine, remains the first in new product announcements, unbiased reviews, and indepth reporting. AC's unique columns like *Roomers* and *Bug Bytes*, step-by-step programming articles, and entertaining tutorials have made it the magazine of choice with devoted Amiga fans. With AC you remain on the cutting edge of Amiga product development.

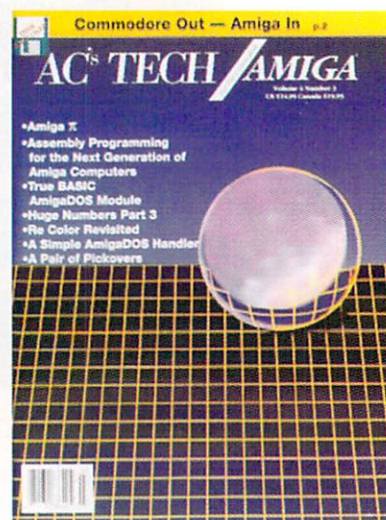
## AC's Guide



*AC's Guide* remains the world's best resource for Amiga product information. A compilation of new product announcements from AC and exhaustive research, *AC's GUIDE* is a constantly updated reference to the ever changing Amiga market.

With an **AC SuperSub**, you will receive 12 issues of *Amazing Computing* and two issues of *AC's GUIDE* at a tremendous savings.

## AC's TECH



*AC's TECH* was the first disk-based technical magazine for the Amiga. This quarterly collection of programs, techniques, and developer issues has been created for Amiga owners who want to do more with their Amigas. If you want to expand your Amiga knowledge beyond the ordinary, then *AC's TECH* is a must.

Complete your *Amazing Computing* library and FRS collection

Mail or FAX (508-675-6002) the enclosed order form or call toll-free in U.S. or Canada, 800-345-3360.  
Foreign orders please call 508-678-4200



PeeCee's

# Digital Imagery

**High Quality  
35 MM  
Slides  
from your  
Amiga™  
Graphic Files**

Slide imaging prices start at

**JUST \$3.50**

(72-hour Turnaround / 4K Resolution / Most Amiga Formats)

**945 Walnut Street Fall River, MA 02720**

**Voice Tel. 508.676.0844**

**BBS 508.676.9308 (14400/8N1)**

**FAX 508.676.5186**



# NEW PRODUCTS

*and other neat stuff*



Play Incorporated: from left to right, Paul Montgomery, Mike Moore, John Botteri, and Kiki Stockhammer have joined forces to create the next level of video technology in a multiplatform environment.

## LET'S PLAY!

### Three-Way Merger Creates Desktop Video "Super Company"

Digital Creations, Progressive Image Technology and a group of eight senior staff members who left Video Toaster-maker NewTek earlier this year have merged to form a new company called, Play Incorporated. The new company will be headed by Mike Moore as Chairman, Paul Montgomery, as President, and John Botteri, as CEO. "Between the three groups we've shipped over 50 products", said John Botteri, "Each of us has dominated in our own area: hardware, software, and marketing. Together, we will be the leader in PC video."

In a telephone conversation, Mr. Botteri went on to say, "We are extremely proud of Digital Creations and what we have accomplished. Digital Creations will continue to upgrade and support products for the Amiga market. Play allows us to create future technology as well as to provide products and new directions to the expanding video market."

Digital Creations, headed by John Botteri, has been a leader in video applications on the Amiga since 1986. In addition to marketing and writing the applications software for all of Progressive's desktop video products, Digital developed three breakthrough video paint systems.

Exploiting their expertise in real-time graphics, Digital also created several award-winning entertainment titles for Electronic Arts.

The Progressive Image Technology team, led by Mike Moore and including former Grass Valley Group engineering talent, began creating hardware for personal computers in 1978. Progressive has been a pioneer in computer video since the early eighties when they engineered desktop video products for both IBM and Apple. Since then Progressive has designed many successful video peripherals including video effects hardware, overlay cards, genlocks, digitizers, and time base correctors.

The group from NewTek includes former Vice-President Paul Montgomery as well as NewTek's former directors of sales, marketing, and software development. The group also includes key software engineers from the Emmy-award winning Toaster team and Kiki Stockhammer, the industry's best-known spokesperson.

When asked about the way the Play team was created, Mark Randall, Vice President of Marketing at Play and former Director of Marketing at NewTek, stated, "It was a perfect fit. Each group was exceptionally good at different things. We began talking as friends, just discussing the market and the opportunities. We quickly realized how well each group worked together and how much we could achieve as a single company."

Play's current offices are not large enough for the 30 plus people now making up the new company. One of the first actions by the new company will be to find new headquarters.

Play is owned entirely by its employees. The first of its PC video products will be shipping within 90 days.

Play Incorporated, 160 Blue Ravine Road, Ste. B, Folsom, CA 95630, Tel (916) 344-4825, FAX (916) 635-0475  
Inquiry #215

## The Intuition Extension

PLAYFIELD! announces the release of The Intuition Extension by Andy Church. This program gives AMOS and Pro programmers the ability to create true Intuition applications; open and manipulate Intuition screens and windows, in all possible screen modes, even the AGA modes; open and manipulate true Intuition windows; and more. You can even create and monitor menus on your Intuition screens. Now you have the ability to paste AMOS icons and bobs on Intuition screens!



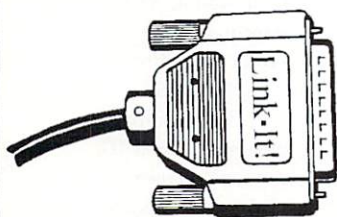
# NEW! Link-It!™

Now you can transfer files from your Amiga to your PC! Or, use it Amiga-2-Amiga or PC-2-PC!



*It's finally here! An easy way to transfer files of all sizes from computer to computer. This product works between two Amiga's, two PC's, or between an Amiga and a PC. There is no other product like it!*

- Serial or Parallel transfer.
- Perform file conversion as you transfer! Imagine selecting several IFF picture files on the Amiga and have them transferred in PCX format to your PC!
- Extensive AREXX™ interface - even allows you to send commands to the remote computer.
- Easy, one-terminal operation.
- Both Amiga and Windows™ versions included!
- Conversion and file display programs are completely external and therefore completely upgradeable as new file formats become available.
- Automatically adjust filenames and file patterns to match the appropriate machine.
- Amiga version supports GVP's ioExtender and the Multiface cards.



Includes a high-speed parallel cable.  
**Only \$59.95! US**

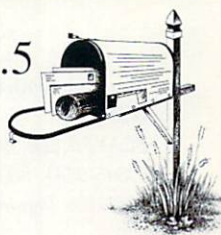


Legendary Design Technologies Inc.  
25 Frontenac Avenue, Brantford, ON CANADA N3R 3B7  
P.O. Box 1147, Lewiston, NY 14092-8147 U.S.A.  
(519) 753-6120 voice/fax

*Committed to the Amiga!*

## Address-It!™ v1.5

Manage your mailing lists the easy way! The latest version sports the "3D" look and is compatible with all word processors. Print labels, phone books, envelopes, rosters and more!



## dataMIX™ CD-ROM #1

COMPACT disc

Amiga format fonts, clip art, sound, 3D objects, music & more!

## Invoice-It!™ v1.2

New version!

Dedicated invoicing software for any business! Custom invoice layout, detailed reports, statements and more! New version includes product database and automatic interest charges.

## ProPic™

4 exciting volumes to choose from!

- #1: Scenic & Landscape
- #2: Textures & Patterns
- #3: Still Life
- #4: Abstract

*Sharpen your image with these 24-bit backgrounds. Perfect for Toaster owners!*

Includes ProImage image processor!

## dataTAX™ '94

*Do your taxes the easy way!*



Available January 1995 with a new and improved interface.

## SFX™ Volume #1 ON CD-ROM

300 high-quality sound effects with an easy-to-use Amiga interface!

COMPACT disc

Perfect for video production!



The world's largest producer of commercially available sound effects!



Complete with manual and disk the price is \$14.95.

PLAYFIELD!, PO box 450884, Sunrise, FL 33345-0884, Tel (305) 846-7969, BBS (305) 456-0126. Inquiry #216

### The Enhanced Music Extension

Direct from Australia by Paul Reece this is the complete replacement for the old AMOS Music library. The Enhanced Music Extension fixes all known bugs in the music.lib, and adds more features! Play trackers directly, using the latest Protracker playroutine. Play samples at the same time as the tracker plays - without crashing the system - and without ruining the music! EME introduces new 'sample priority' system, a sample with lower priority will not play over a sample with high priority! Important sounds will not get drowned out - without having to keep track of it yourself. It also contains direct MED support using the medplayer.lib. Play samples directly from a tracker, and get all types of information from the tracker. Even use the extension to monitor and take samples from your sampler! Many new features and new commands all for only \$14.95 from PLAYFIELD!

PLAYFIELD!, PO Box 450884, Sunrise, FL 33345-0884, Tel (305) 846-7969, BBS (305) 456-0126. Inquiry #217

### Replica Technology Announces 5 Products

Interior Design I - A collection of over 50 real world scaled furniture objects for the living room, bedroom, and dining room. This collection contains such items as beds, chairs, tables, storage, cabinets and other household items. All furniture, doors and drawers can be animated. Compatible with Lightwave the suggested retail price is \$49.95.

Interior Design II - A collection of over 50 real world scaled furniture objects for the kitchen and bathroom. Also includes a number of lighting objects. This collection contains appliances, kitchen cabinetry, sinks, vanities, toilet, tub, toiletry and other household items. All furniture, doors and drawers can be animated. Also compatible with Lightwave the suggested retail price is \$49.95.

Interior Design III - A collection of over 50 real world scaled furniture objects for the office. This collection contains chairs, desks, bookcases, tables, file cabinets, workcenters, and other office furniture. All furniture doors and drawers can be animated. Compatible with Lightwave, the SRP is \$49.95.

Homes - A collection of 4 complete real world scaled homes for Lightwave, including interior rooms and exteriors. All doors and windows can be animated. Over 120 surfaces per home, and all four can be loaded in one scene without surface name duplication. One-story, traditional, lakeside, and ranch style homes. Suggested retail price is \$99.95.

Interior Construction - Create your own rooms and interior environments with this collection of over 150 real world scaled objects. This includes doors, windows, stairs, fixtures, moldings, walls, floors, ceilings, and rooms. Designed for interchangeability to achieve various combinations of interior elements. Doors and windows can be animated. Suggested retail price \$99.95.

Each object is fully surfaced and ready to just load and render. Procedural Textures were used for the objects, making the appearance of each object easy to modify and customize. Each object is designed to accurately represent it's real-world counterpart in appearance and size. All of the objects in the Interior Design and Homes collections are also fully functional and ready to animate. Prices are valid as of June 16, 1994. Prices are subject to change. Replica Technology, 4650 Langford Rd., N Collins, NY 14111, Tel (716) 337-0621, FAX (716) 337-3887. Inquiry #218

### FreeForm 3D B-spline Modeler

The FreeForm 3D B-spline Modeler brings truly affordable, super-fast B-spline modeling to your current 3D program rivaling that of high end workstations. FreeForm can output to Lightwave, Aladdin4D, Real3D2, Imagine, and Caligari. (POV and Rayshade are currently being added). FreeForm has a real-time object and point editing in all views; and a real-time, 3D space, through the camera perspective view. In addition to the standard 3D tools, FreeForm has tension adjustment to B-spline (giving NURB like control), deformations, rail extrusion, morph extrusions, cross sectional skinning, automatic Bones creation, real-time Bones manipulation and on-line help. FreeForm even gives Real3D2 users a faster, easier to use B-spline environment, and a 20 times faster grayscale preview curve rendering. FreeForm 1.7 is \$65, requires at least a 68020 with a FPU, and 1.2 megs of Ram. Usable demo of v1.6 on Aminet ftp 128.252.135.4 in gfx/3D and on Compuserve.

Fori Owurowa, 1873-75 Cropsey Ave, Brooklyn, NY 11214, Tel (718) 996-1842 12 noon to 7pm Eastern. Inquiry #219

### Two new products from Prime Software

MultiLayer for AdPro - The long awaited digital layering, compositing and effects tool for the Amiga supports unlimited layering of motion video, stills and animation. Complete timeline interface with dozens of pro editing/compositing tools. Layers can be composited using Image Mapping, Luminance-keying, Alpha-keying, Chroma Keys and more! Image sequences can be generated in resolutions from lores anims to film resolutions of 4800 x 3200 pixels and beyond in full 24-bit Color. Complete graphic compositing environment with Cutting, Pasting, Copying & Swapping of layers' priorities at any point in time and space with linear or non-linear motion of layers, each with different effects! Support for 24-bit framebuffers and digital disk recorders such as VLAB Motion and PAR. Requires ADPro 2.5 and Workbench 2.0. Suggested List price: \$129.95.

MultiLayer for Image-FX - This digital layering, compositing and effects tool for the Amiga supports unlimited layering of motion video, stills and animation. Complete timeline interface with dozens of pro editing/compositing tools. Layers can be composited using Image Mapping, Luminance-keying, Chroma Keys and more! Image sequences can be generated in resolutions from lores anims to film resolutions of 4800 x 3200 pixels and beyond in full 24-bit Color. Complete graphic compositing environment with Cutting, Pasting, Copying & Swapping of layers' priorities at any point in time and space with linear or non-linear motion of layers, each with different effects! Support for 24-bit framebuffers and digital disk recorders such as VLAB Motion and PAR. Requires Image-FX 1.5 and Workbench 2.0. Suggested list price: \$129.95

Prime Software, 31164 Country Way, Farmington Hills, MI 48331-1035, Tel (810) 661-3393. Inquiry #220

### Fusion Forty 60™

RCS Management, through its R&D section, has turned the Fusion Forty™ into a new generation accelerator by giving it the ability to handle the MC68060 CPU from Motorola. This unit is fully compatible with the Toaster, Imagine 3.0, Real 3D, Caligari and many more. Current users of the Fusion Forty™ are welcome to update their 28mhz MC68040 to the new MC68060 without having to replace the RAM. The RAM modules will still be the industry standard 1 x 8 or 4 x 8 SIMM modules given



# STOP LOOKING!

We have the lowest Amiga prices anywhere!

Better Yet, WE ACTUALLY HAVE CD-32's, 1200's, 4000/030's, & 4000/040's IN-STOCK NOW!

# Computer Answers

917 - Central Avenue, Prince Albert, Saskatchewan, Canada S6V-4V2  
Phone: (306) 764-2888 Fax: (306) 764-0088 BBS: (306) 764-0888

(306) 953-8960  
(306) 953-8961

9:30-6:00 Mon-Sat (Mountain)

When this add went to press, the details of the Commodore re-organization were not finalised, however, all indications are that this change of direction will put the Amiga in it's strongest position ever! We are very excited about the future of the Amiga and are continuing to offer the best possible prices on all available Amiga's.

CD-32	A1200	4000/030	4000/040	4000 Tower	Amiga 4000 Upgrades
\$299	\$329	\$1,299	\$1,499	\$2,399	
- 68EC020 Cpu @ 14 Mhz - AGA 32-Bit Chipset - 2 MB Chip RAM - 600 MB CD-ROM Drive - Double Speed CD-ROM	- 68EC020 Cpu @ 14 Mhz - AGA 32-Bit Chipset - 2 MB Chip RAM - IDE Hard Drive Controller - 880K Floppy Drive	- 68EC030 Cpu @ 25 Mhz - Math Chip Optional - 2 MB Chip RAM - IDE Hard Drive Controller - 1.76 MB Floppy Drive	- 68LC040 Cpu @ 25 Mhz - Math Chip Optional - 2 MB Chip RAM - IDE Hard Drive Controller - 1.76 MB Floppy Drive	- 68040 Cpu @ 25 Mhz - Math Chip built-in - 2 MB Chip RAM - SCSI & IDE Drive Controllers - 1.76 MB Floppy Drive	1MB Simm \$ 39** 4MB Simm \$ 159** 8MB Simm (60ns) \$ 339** 16MB Simm (60ns) \$ 689** 32MB Simm (60ns) \$1349** 210 MB IDE HD \$ 199** 340 MB IDE HD \$ 299** 420 MB IDE HD \$ 399** 520 MB IDE HD \$ 499** **Add to any 4000 system!
Limited Supplies!	Back in Stock!	Back in Stock!	Supplies Limited!	Call for Availability!	

Amiga 1200 HD	Amiga 1200/030	Toaster 4000	PAR System	Warped Toaster
\$1,399	\$1,999	\$3,999	\$4,099	\$6,599
(Yes, we actually have 1200's)	(Yes, we actually have 1200's)	(Best Toaster Starter Ever!)	(Broadcast Quality Anims!)	(Fastest Toaster Ever!)
- Amiga 1200 Computer - 68020 CPU @ 14 Mhz - 2MB RAM - 210 MB Internal Hard Drive - Electrohome 1440 Monitor - All Cables & Connectors	- Amiga 1200 Computer - 68030 CPU @ 25 Mhz - 4MB RAM - 340 MB Internal Hard Drive - Electrohome 1440 Monitor - All Cables & Connectors	- Amiga 4000 Computer - 68030 CPU @ 25 Mhz - 10MB RAM - 210 MB Internal Hard Drive - Video Toaster 3.1 - Commodore 1084 Monitor	- Amiga 4000 Computer - 68030 CPU @ 25 Mhz - 6MB RAM - 210 & 540 MB Hard Drives - PAR Card (60fps animation) - Electrohome 1440 Monitor	- Amiga 4000 Computer - Warp Engine 040 @ 40 Mhz - 20 MB RAM - 540 MB SCSI-II Hard Drive - Video Toaster 3.1 Card - Commodore 1084 Monitor

Painting, Animation, Music & Video Software	Final Copy Word Processor	Accelerators & Memory Boards	Monitors with Amiga / Alone
Anim Workshop Version 2.0 \$ 99 Deluxe Paint 4.5 (AGA Version!) \$ 99 Brilliance Paint (24 Bit on AGA!) \$ 59	Pro Calc \$ 109 ProPage 4.1 \$ 75 ProDraw 3.03 \$ 75	Warp Engine 4028 (28Mhz & SCSI-II) \$ 699 Warp Engine 4033 (33Mhz & SCSI-II) \$1099	Commodore 2024 (1024X800) \$199 / \$269

Amiga 4000/CD!	Par Animation Card!	2024 Hi-Res Monitor	Electrohome 14"
\$2,299	\$2,299	\$199	\$439
- A4000/040, 6MB RAM/210 HD - CD-ROM & Controller	- 60 fps Broadcast Quality Anims - 500 MB Hard Drive	- 1024 X 800 Non-Interlaced - Ideal for Desktop Publishing!	- 28mm Dot Pitch, 15-40KHz (14") - Developed here in Canada!

Caligari 24	Real 3D version 2.0	Imagine 3.0 (Now In Stock!)	Sparks (Particle Animation)	Swipes (for Video Toaster)
\$ 119	\$ 379	\$ 379	\$ 99	\$ 89

Groliers Encyclopedia	Video, Audio, Graphics & DTV Peripherals	Warp Engine 4040 (40Mhz & SCSI-II)	DKB 1240, 68030 @ 40Mhz
\$49		\$1299	\$ 299
- on CD-ROM	RocGen (Low cost external genlock) \$ 199 SuperGen SX (Broadcast quality) \$ 689 TBC IV from DPS (Updated version) \$ 789		

Art Department Pro (Ver 2.5)	Montage Character Generator	Pegger (Jpeg compression!)	Bars & Pipes Professional Version 2.0	Deluxe Music Version 2.0	Distant Suns Version 5.0	Image FX Version 1.5
\$ 139	\$ 225	\$ 69	\$ 215	\$ 79	\$ 59	\$ 169

Warp Engine @ 40Mhz	MPEG Card for CD-32	Kitchen Sync (Two complete TBC's!)	Retina 24 Bit Card 2MB (Still great!)	Retina ZIII (4MB Version)	Picasso II (24 Bit Graphics Card)	GVP Spectrum (with pass-thru)
\$1,299	\$299	\$1189	\$ 299	\$ 729	\$ 429	\$ 389
-68040 & SCSI-II @ 40 Mhz**	- with any two movies, FREE! - Apocalypse Now, Blade Runner, Big Boy, Easy Rider, Grease, Indochina, Red October, Independent Proposal, Naked Gun 2 1/2, Patrick Swayze, Silver, Star Trek 6, The Firm, Top Gun					

Merlin 24 Bit Video board	VLab Video Digitizer with 30fps	VLab Y/C (with Super VHS connections)	Personal Animation Recorder by DPS	Video Toaster (with computer only)
\$ 569	\$ 369	\$ 469	\$1459	\$1799

Image FX from GVP	Personal Component Adaptor (YC+)	Supra 2400 Modem	GP FAX Software for Supra Modems	Best Data 14,400 Baud Fax/Modem	AlfaData 800 dpi Hand Scanner
\$169	\$ 259	\$ 49	\$ 49	\$ 149	\$ 169
- Version 1.5					

Brilliance	Overkill	Trolls
\$59		
- #1 Painting program!	Pinball Puzzle Gold Rise of the Robots Sabre Samurai Sensible Soccer Simon the Sorcerer Soccer Kid SpeedBall 2 Summer Olympics Super Punt Super Mechano Bros TFX Total Carnage Traps & Treasures Trivial Pursuit	Turkian 3 Uridium 2 US Football Whales Voyage Zool 2

Shipping & Handling	Software, Peripherals & Accessories	Computers & Monitors
	0-20lbs .95/lb 2 Days Over 20lbs add .50/lb 2 Days	CD-32 or A1200 \$19 5 Days A4000 or 4000T \$39 5 Days Monitor \$29 5 Days

Next Day & Second Day Air is also available.  
These are the average rates & delivery times in business days for ground service within Canada & the USA and include all regular shipping, handling, duty, brokerage, customs clearance and door to door delivery. Some orders may require special handling, installation etc., therefore this is only a guideline. Delivery rates & times are not guaranteed. UPS/FEDEX/MAIL will not accept claims for damage/loss without insurance. Insurance is 4% of insured amount.

\* OK It's a 6 point font now. Is that better? The prices shown are in US\$ and are based on the US\$-Canadian\$ exchange rate as of add creation therefore actual prices may vary slightly (usually less than 1/2%). All transactions are in Canadian funds. Your bank will convert to Canadian funds when you place an order and we authorise your card. You do not get charged any tariffs or duties. This add reflects products & pricing available to us as of June 30/94. By the time you read this in the Sep 94 issue, some things will probably have changed. Delivery times are not guaranteed. There will be a 15% restocking fee on orders refused/cancelled/returned (except for defectives returned for warranty repair). Items temporarily out of stock will be special ordered and shipped when available. If any of this is unclear, please ask for details before ordering. Sorry, but we can't be responsible for damage, delays or loss during shipping, so please insure your order. Prices shown reflect a 2% Cash discount.



that RCS products do not use proprietary RAM. The MC68060 contains the FPU, MMU and a new feature called SUPERSCLAR. The superscalar feature enables the MC68060 to detect, dispatch, execute and return results from more than one instruction during each machine cycle. The clockspeed is rated at 50mhz and at a later date the 66mhz. Shipping will commence in October, 1994, unless Motorola reschedules the release of the 68060 CPU. Please contact RCS for pricing and upgrade policies.

*RCS Management, 6955 Taschereau Blvd #211, Brossard, Quebec, Canada, J4Z 1A7, Tel (514) 926-3755, FAX (514) 926-3131, BBS (514) 738-7262. Inquiry #221*

### The FractalPro Image Library, Volume 1 - On CDROM

This CDROM includes over 350 fractal art images plus dozens of VistaPro™ DEM files of fractal objects. It is a fully 'Amiga-tized' CDROM with easy access to all IFF images via drawer and direct-view icons. Organized as sets of 16 images, each has a 'thumbnail' image showing all 16 images in the set. Includes Mandelbrot, Cube, Quad Mandelbrot, and Julia Sets, and Transcendental Fractals as well as 4 additional sets of miscellaneous fractals, stereoscopic 3D fractal-wrapped spheres, VistaPro-rendered fractal landscape images, and video overlays of fractals with human faces and more. Almost all of the hundreds of GIF images may be used royalty-free in your art and graphics projects. It is fully compatible with all Amiga CDROM readers and NewTek's Video Toaster. The suggested list price of \$59.95 includes shipping in North America and is available now.

*MegageM, 1903 Adria Ave, Santa Maria, CA 93454, Phone/FAX 805-349-1104. Inquiry #222*

### V-Station for Toaster

FutureVideo has announced their very affordable A/B Videotape editing system dubbed V-STATION for Toaster. This system provides the professional performance Toaster users expect — but at a fraction of the cost. This hardware/software system, is comprised of a user-friendly software package and a compact external edit controller. The system is capable of supporting a wide variety of VTRs from different class levels and tape formats. Selected consumer-grade VCRs and camcorders fitted with Sony's Control-L (LANC) and low-end industrial AG-1970/AG-1960 Panasonic VCRs are supported. Optional VTR driver kits to add selected VISCA, RS-232C, and RS-422A controlled professional VTRs are also available. It is capable of direct ARexx

communications with the Video Toaster and all of the Toaster's settings are read directly back to the V-STATION and saved as part of the V-STATION's event record. Suggested retail price \$1295.00.

*FutureVideo Products, Inc., 28 Argonaut, Suite 150, Aliso Viejo, CA, 92656, Tel (714) 770-4416, FAX (714) 770-4667. Inquiry #223*

### User Group Update

The Metropolitan Amiga Computer Enthusiasts (M.A.C.E.) group has undergone some changes. Their new President is Mr. Frank Salvatini. Please note that their meeting place is now at College of DuPage, 22nd & Lambert Rd. in Glen Ellyn, IL 60134. They are still meeting on the 2nd Wednesday of the month from 7-10pm. The new mailing address is 534 Woodfield Trail in Roselle, IL 60172 with the contact phone number being 708-529-3008. Mr. Salvatini also told AC that they have absorbed the membership of the former Fox Valley Avenue user group of Aurora, Illinois.

### Avongard Products Instructional Videotapes for REAL3D v.2

Master the powerful 3D modeling and animation features of REAL3D V2™ with the AvongardVideo Guides. Each of the four videotapes in the series contains carefully constructed tutorials which provide up to 90 minutes of intensive hands-on learning. The four include: "The Basics" which teaches the basic principles and techniques of REAL 3D and focuses on use of the object hierarchy, modeling, simple animation, and material editing; "Motion Magic" which is an intermediate video which covers the advanced techniques of camera control, keyframing, inverse kinematics, and particle animation; "Optical Delusions" which explores the use of materials and lighting effects to achieve photorealistic results; and "Free Form 'N' Deform" which focuses on advanced animation techniques involving free form modeling, character animation, and boolean operations. For more information please contact:

*Activa International BV, England, Tel: 44 71 371 5241, FAX 44 71 371 5873, Holland, Tel: 31 2153 80 639, FAX: 31 2153 80 679, Germany, Tel: 49 40 640 4020, Fax: 49 40 640 40 32. Inquiry #225*

### MultiVol™ Mirror

MultiVol Mirror backs up or "mirrors" a file to one or more devices every time the file is saved, either by the user or by any program. Multiple versions of a file can be saved in case the user accidentally overwrites the file. MultiVol Mirror works with any device — including the console device. A complete graphical user interface

with online help is provided. However, manual entry and editing is also allowed. The user can start or shutdown the facility as well as tailor it. Recovery of files from mirrored devices is also supported. Requirements are Amiga DOS 2.04 or higher with a suggested retail price of US \$45.

*AugmenTek, 3606 S 180th St C-22, SeaTac, WA 98188-4339, Tel 206-246-6077. Inquiry #226*

### TypeSmith 2.5

Soft-Logik Publishing Corp. announced an updated version of TypeSmith, their font editor for the Amiga. TypeSmith 2.5 adds TrueType font support, improved hints for PostScript fonts, more ARexx commands and improved printed font previews. This updated version can load and save TrueType fonts. The addition allows Amiga users to purchase TrueType fonts and convert them to another format for use with the Amiga software such as PageStream, Art Expression, Professional Page, Deluxe Paint, Final Writer, Brilliance, Lightwave and the Toaster Character Generator. Font conversion is also easier with the addition of the new Batch Convert ARexx macro. Now users can convert an entire directory of fonts with just the press of a function key. Expected release is mid-August with a suggested retail price of \$199.95. Registered owners of TypeSmith 2.0 can purchase the upgrade for \$25 plus shipping and handling (\$5 USA/Canada, \$15 International).

*Soft-Logik Publishing Corporation, 11131 F South Towne Sq, St Louis, MO 63123, Tel: 800-829-8608 or 314-894-8608, FAX 314-894-3280. Inquiry #227*

### BBASEIII

Version 3.0 of bBaseIII, a database program, is now shipping. This version offers what users have requested most, namely more data fields. There are now 16 data fields available, plus a 600+ Kb Note area for miscellaneous information, and all can be viewed simultaneously on an interlaced screen. bBaseIII is a shareware program. Registration is \$18 US, or \$10/\$5 to upgrade from versions 1 or 2, respectively. Robert Bromley, 1168 Timber Lane, Victoria, BC, Canada V8Y 1E4, (604) 658-0340. Inquiry #228

*The Press releases and news announcements above are from Amiga Vendors and others. While Amazing Computing maintains the right to edit these articles, the statements, etc. made in these reports are those of the vendors and not Amazing Computing magazine.*

•AC•



# Bars & Pipes Professional

## 2.5 Upgrade

*reviewed by Rick Manasa*

### MIDI SEQUENCING AND BEYOND FOR THE AMIGA

Blue Ribbon Soundworks has released Bars & Pipes Professional 2.5—billed as a major upgrade to their popular MIDI sequencer. It seems like only yesterday we were reviewing their feature laden 2.0 version. Apparently Blue Ribbon can't keep themselves from listening to their customers and improving their software. While not as radical a jump as the 2.0 version, the latest incarnation of Bars & Pipes Professional has almost fifty new features including new tools, improvements, bug fixes and general enhancements, most in response to user input.

#### General Improvements

There are a number of looping options new to Bars & Pipes Professional 2.5. You can loop any number of measures on any number of tracks at the same time through the Song Construction window. Once you define a section, you can have that section repeat up to 255 times. You can also record a non-looping, or linear track over the looping section. Linear tracks are like Real Time tracks in that they don't loop. Unlike Real Time tracks, however, they do follow tempo changes.

SMPTE time codes can be entered more easily. You may be more comfortable defining your music sections by measures and beats, but need SMPTE references for locking to video. Simply enter your flag positions as you usually do and hit the notes/film toggle button to see the positions displayed in SMPTE format.

#### Merge and Split

Two of the most useful changes made in Bars & Pipes Professional 2.5 have to do with merging and splitting Tracks. It wasn't until this release of Bars & Pipes Professional that you could merge a Group into one Track. And now you can also split a Track into several Tracks with each Track holding a single



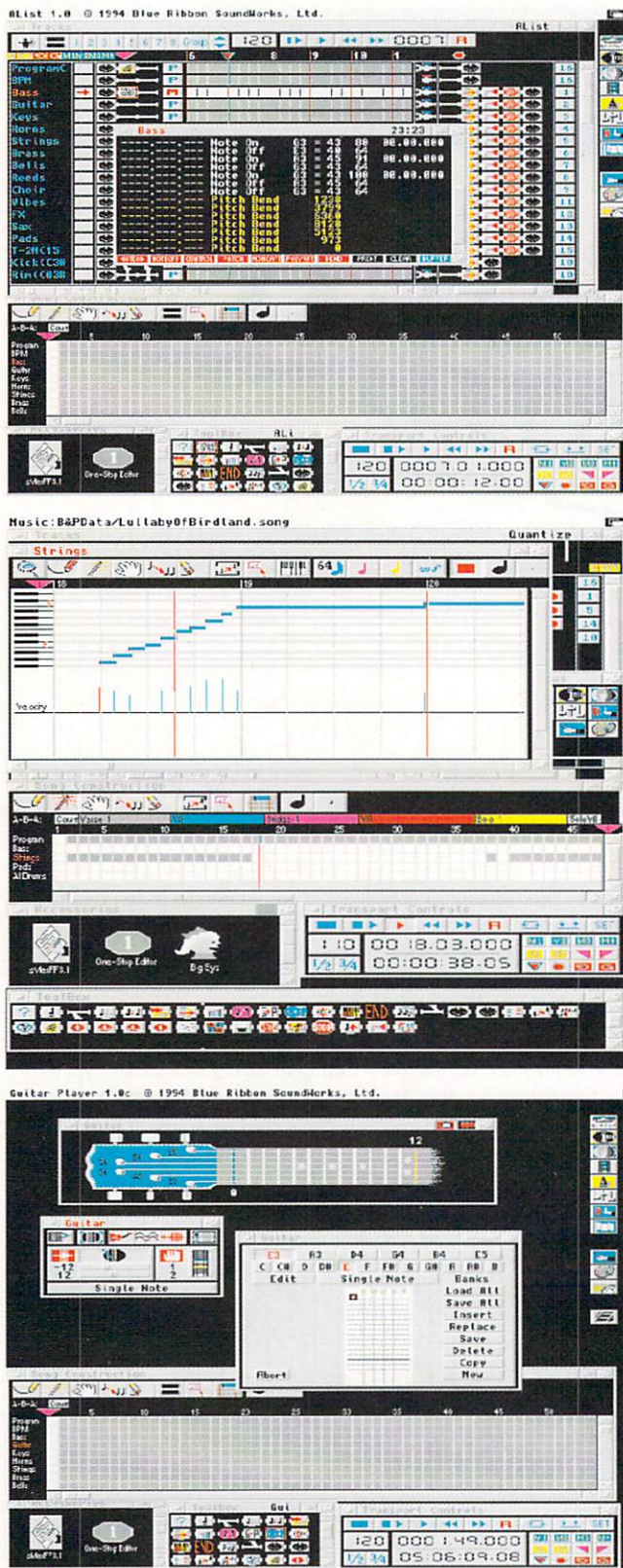
pitch. This is ideal for splitting a drum kit into its individual drums for transposing, processing or what have you. When you're all done massaging the individual tracks, merge them back together to create a smaller file. These two features are so helpful you wonder why they weren't implemented a long time ago.

Another "Why Didn't They Do This Earlier?" feature will let you Replicate a Tool across a Group or across all Tracks. I go back and forth between the One Stop Music Shop and my MIDI setup. Changing the MIDI In and Out Tools used to be one of those small but annoying processes I'd have to do whenever I switched sound



The Auto\_Mix Tool acts like a multi channel mixing console and is designed to work with an external hardware mixer.





The A\_List Tool will display all MIDI events, except for SysEx messages, in a large window with seven filtering options.

The Graphic Editor has been thoughtfully redesigned by Blue Ribbon with suggestions by their users.

The Guitar Tool is great for converting chords played on a keyboard into guitar voicing.

sources. Not anymore. Clips can now be mixed, as well as inserted into Tracks. Previous versions only pasted the Clip at the indicated location, forcing you to paste your Clip into any empty track and then Merge it with another track to effect a mix. A messy process at best.

## Graphic Editor Enhancements

You can tell Blue Ribbon was listening to their customers when they made changes to the Graphic Editor. The Listen button now serves double duty as a Listen/Stop toggle. If I had a nickel for every time I wanted to stop the playback in the Graphic Editor before the whole window played I'd be quite well off, thank you.

Another nice touch is the Listen/Auto Stop menu item. When disabled, the selected track will keep playing until you hit the Stop button.

Remember how you had to select Update from the Edit menu or close out of the Editor all together to hear how your edits sound in context with the rest of the music? Bars & Pipes Professional 2.5 will now play your edited track when you select Play from the Transport control. If you don't like it, you can still Abort to keep your original performance.

Many miscellaneous features have been added or improved. The Metronome window now accepts keyboard equivalents for many of its functions. It's easier to take advantage of the double width and height screens of Workbench 2.0. The Alt keys and cursor keys move you to one of the four quadrants available. You could have each quarter of the virtual screen loaded with its own set of windows. The Toolbox can now be alphabetized. Step entry has been simplified, clicking the right mouse button cancels many editing functions in process and many other small but significant improvements are scattered throughout.

## Print It

One of the weakest features of Bars & Pipes Professional has always been its printing facility. While Bars & Pipes Professional 2.5 doesn't offer full blown notation yet, it is getting closer. You can now print ledger lines above and below the grand staff and tablature markings as well. You have more control over how the final output looks. Bars & Pipes Professional 2.5 lets you decide how many measures per line and staves per page it will print. There is also a Note Spacing option which controls the overall resolution of the printout.

## Tools

Many of the Tools in the 2.0 version of Bars & Pipes Professional were designed to make it easy to interface B&P Pro with the outside world — VCR's, TBC's and the like. While this expanded the capabilities of the program, it didn't make music making appreciably easier. The new Tools in Bars & Pipes Professional 2.5 are more like the original sets of Tools in that they are designed to make the composer's task easier.

The A\_List Tool is a logical expansion of the old Flasher Tool. Where the Flasher would blink whenever MIDI information was passing through the Pipeline, the A\_List Tool will display all MIDI events, except for SysEx messages, in a large window with seven filtering options. You can select to display or filter Note On, Note Off, Control Changes, Mono and Poly Aftertouch, and Pitch Bend information. Other buttons allow you to print or clear the list and select printing options. This is a great way to track down gremlins.



The Auto\_Mix Tool is similar to the Mix Maestro. It acts like a multi channel mixing console and is designed to work with an external hardware mixer. The Auto-Mix Tool records user defined control changes, solo and mute commands on any of sixteen channels directly into the track the Tool is placed on. Channels can be ganged together into submixes, just like on a hardware console. Channels in subgroups can move independent of each other, together as a group or relative to each other in a number of ways. Crossfading is also possible. Mutes can also be grouped.

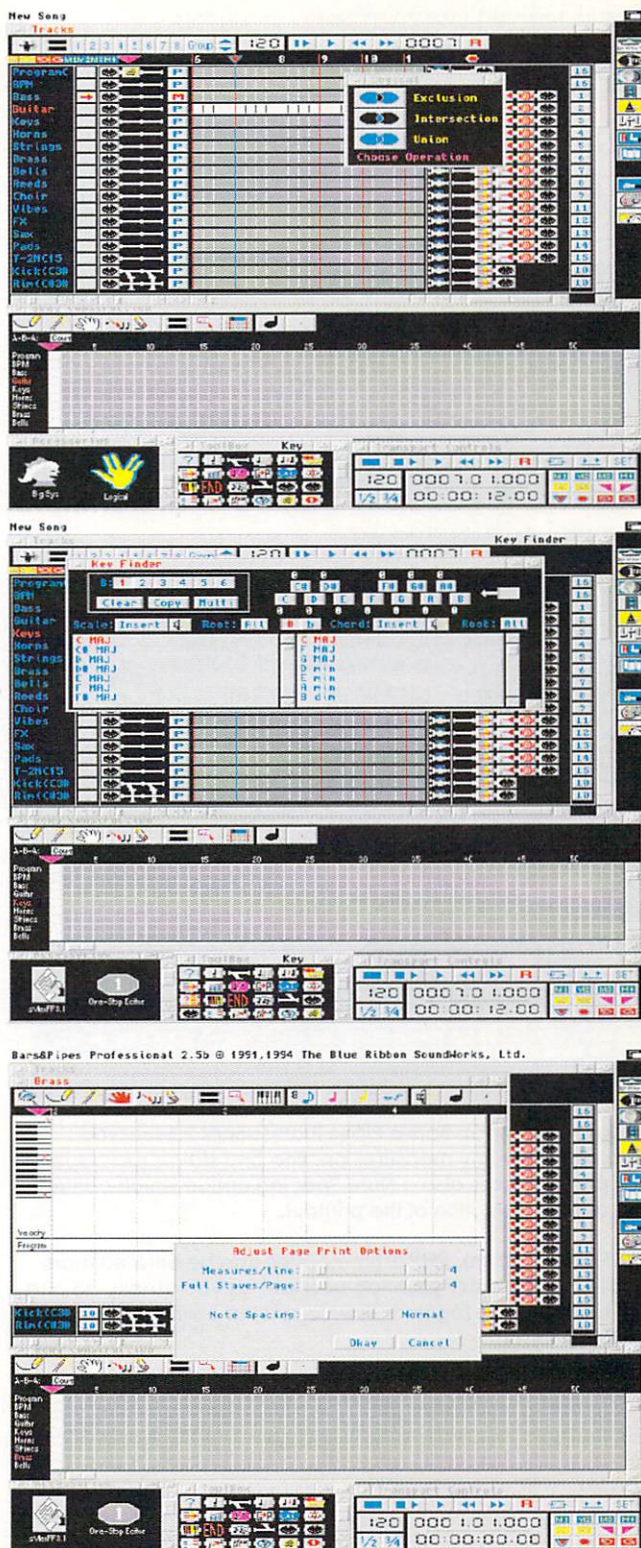
The Drum Key Tool turns your Amiga keyboard into a drum pad, sending out user definable MIDI note numbers for any key. You can define and save different maps.

The Guitar Tool is great for converting chords played on a keyboard into guitar voicing. The effect is very convincing. It is a complex Tool but promises to be well worth the time spent mastering if you are a guitar player or have an interest in authentic guitar voicing and phrasing. The Guitar Tool lets you bend notes and add vibrato using the mouse buttons. You can use alternate tunings and even mute a string completely. Realistic strumming

## Another "Why Didn't They Do This Earlier?" feature will let you Replicate a Tool across a Group or across all Tracks.

can be realized, going either or both directions, with the speed and duration of the strum user definable. The AutoChord feature will convert single notes played on your MIDI keyboard into guitar chords, following all the previously mentioned parameters set up in the Play Options window. The Chord Banks window lets you select, modify and even create chords from scratch.

The Key Finder Tool helps determine chords and scales of a piece of music. Use it to determine and insert chords into the Master Parameters for printing lead sheets and the like. You can select a chord or scale directly from the two sliding lists, manually create chords from individual notes or toolize a section of music and let Key Finder do the dirty work. You can display only scales or chords that have a user defined root note, display notes with accidentals as either sharps or flats, listen to the active chord or scale, set different volume levels for auditioning and do all this to four different banks of chords and scales at the same time. Lots of options here. Sometimes its fun to just rip off a fast riff and then analyze it (That was G Mixolydian? Oh yeah ... I knew that.). Learning music theory through the back door, so to speak.

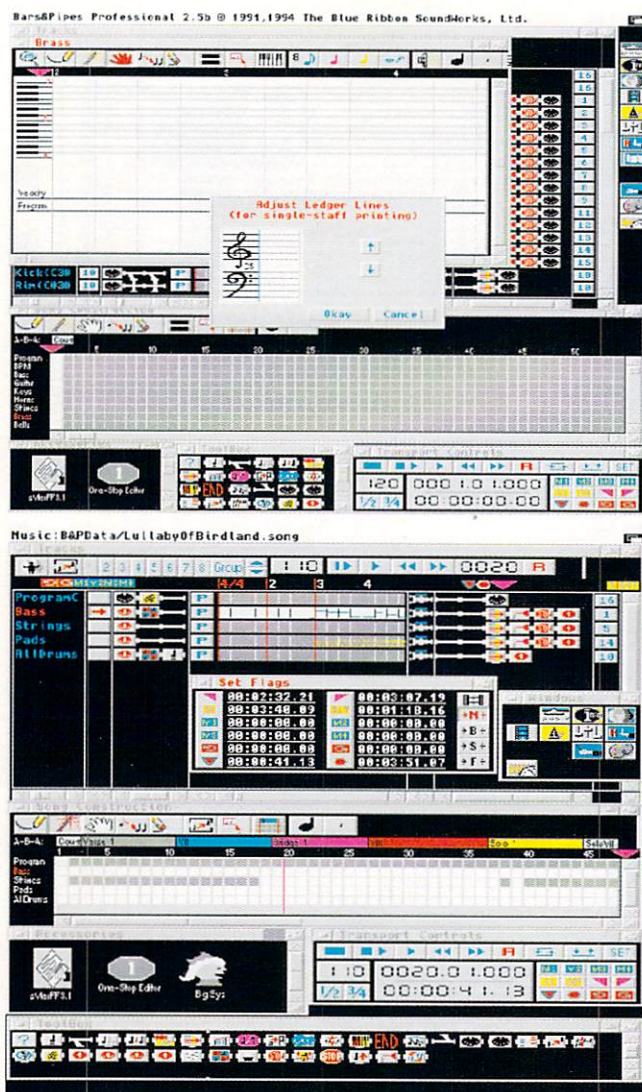


**Print Options (top):** Bars & Pipes Professional 2.5 lets you decide how many measures per line and staves per page it will print.

**The Key Finder Tool (middle)** helps determine chords and scales of a piece of music.

**Ledge Lines (Bottom):** You can now print ledger lines above and below the grand staff and tablature markings as well. You have more control over how the final output looks.





**Ledger Lines (top):** Bars & Pipes Professional 2.5 lets you decide how many measures per line and staves per page it will print. There is also a Note Spacing option which controls the overall resolution of the printout.

**Set Flags (bottom):** SMPTE time codes can be entered more easily. Simply enter your flag positions as you usually do and hit the notes/film toggle button to see the positions displayed in SMPTE format.

The Legato Tool has been improved over the original released with Bars & Pipes Professional 2.0. This is the kind of useful, no-brainer Tool that you'll use regularly to add realism to string tracks. Set the percentage of overlap desired, toolize the track and - presto! - instant articulation. You can use the Legato Tool to shorten a tracks articulation by setting the overlap to a negative number. Very handy.

The Logic Accessory will compare two tracks and perform one of three logical operations on them. It can remove all notes from the second track that are identical to those in the first, that are not identical, or merge notes from the first track into the second that are not already on the second track. The Logic Accessory bases its comparisons on note number, time and duration. If all parameters don't match up, it leaves the notes alone.

## Wouldn't It Be Nice...

As nice as the new version of Bars & Pipes Professional is, there's always room for improvement. A screen display or printout of Drum Key Tool mapping would be helpful. How are you supposed to remember which key holds which drum note, especially while you're playing? Some type of Undo or a safety net for Erasing Tracks would be appreciated. There are too many menu items for each to have its own keyboard equivalent, but how about a user configurable set of hotkeys?

There are a set of activities I do regularly that would be impossible without Mach V and its macro capabilities. Letting the user define the function keys for repeated tasks would make Bars & Pipes Professional 2.5 more efficient.

While the manual is quite thorough, there is no mention made that the two parentheses keys on the keypad are equivalents for rewind and fast forward. I wonder how many other "hidden" hotkeys there are? The sMerFF Accessory doesn't save gradual tempo changes. You'll have to re-enter your changes as small discreet steps.

I have yet to be able to get any kind of printout to my laser printer using Commodore's PostScript driver. Printing with the HP Laserjet driver is quirky at best. In addition to printing some of the score, escape codes were printed, blank pages ejected and my printer hung forcing a reset when I attempted to print a few bars of a simple piano track. This is particularly discouraging because the tech people worked so hard on improving the print facility.

## Conclusions

Bars & Pipes Professional has always been more than your everyday sequencer, from its interface to its capabilities. The 2.0 version showed a logical evolution into a total multimedia control center and environment, from which one can manage and manipulate MIDI tracks, digital audio, graphics, video and animation. Yet while I know it can do all these fabulous media management things, I find myself more drawn to the creative possibilities of the Tools.

Turning the Toolbox loose on an average piece of music can reveal some astounding alternatives. The 2.5 version has refocused Bars & Pipes Professional on its original mission — the making of music. The program has come full circle to what the Blue Ribbon people have been telling us all along — Bars & Pipes Professional 2.5 is a tool for the creative mind.

•AC•

**Bars & Pipes Professional 2.5 upgrade**  
**Blue Ribbon Soundworks**  
 1605 Chantilly Dr. #200  
 Atlanta GA 30324  
 (404) 315-0212  
 Inquiry #202

*Please Write to:*  
**Rick Manasa**  
 c/o Amazing Computing  
 P.O. Box 2140  
 Fall River, MA 02722-2140



## Alex Amor

Creative Equipment International's President speaks out on his plans for purchasing the Amiga.

Alex Amor is the president of Creative Equipment International (see *Amazing Computing* May, 1994) an important U. S. Amiga distributor. Important not only for their rapid rise in the Amiga marketplace, but also for their interest in securing the Amiga technology and continuing the Amiga line and development.

We contacted Mr. Amor on August 16, during a very busy week, when he was preparing the last portion of his company's bid for Commodore's assets. Mr. Amor graciously agreed to the following interview.

AC: Has CEI made their bid?  
Alex: No the bid will be going in on Friday. (August 19, 1994)  
AC: How does the process work?  
Alex: We began with what everybody terms Due Diligence. This means we need to find out exactly what is available from an asset standpoint—can the product be rebuilt, what is in engineering, what raw materials are available, what is in inventory—right on down the line. Once we make our determination, then we go back and state that we are willing to pay so much for all of these assets.  
AC: And you have that information at this point?  
Alex: We have all that information at this point, yes.  
AC: You're ready to give your bid?  
Alex: Based on the information they provided us, we are ready to submit a bid.  
AC: What happens if the information is inaccurate?  
Alex: For example, if they are telling us that there are 10,000 finished machines and there is actually 5,000 finished machines, obviously that will effect the value of the bid. There will be a point where someone will have to go through and do an audit of the actual assets to make sure we are indeed buying 10,000 machines.  
AC: So, are you giving them a deadline as to when you need an answer back?  
Alex: We are telling them that we require to have an answer back in 4 to 6 weeks.  
AC: Another 4 to 6 weeks?  
Alex: Yes.  
AC: But isn't that going to push you beyond the Christmas deadline dates?  
Alex: I don't believe that any product will be available for Christmas. When I say product I'm referring specifically to the A4000 and the A1200. I think in the interim we can have a number of new products announced. They would not be the A4000 or A1200. I don't think

we'll see supplies of both those units until February.  
AC: And even new products would not be seen until next year would they?  
Alex: New derivative technologies will not be seen until next year. You will see some announcements before Christmas, like new monitors, operating systems, some new software that's in the works, etc. But as far as having a new computer, just based on approvals that are necessary from governmental agencies, you won't see any new machines for 6 to 9 months.  
AC: Because the company has changed hands are you still riding under the grandfather clause of the old FCC agreements?

---

"You will see some announcements before Christmas, like new monitors, operating systems, some new software that's in the works, etc."

---

Alex: Yes we are.  
AC: So you don't have to reapply for those.  
Alex: Correct.  
AC: If you buy the company, why don't you give us an idea of the structure you would like to set up. First let's define, who is your group?  
Alex: As far as my group it is Creative Equipment International exclusively, with investors.  
AC: And the investors are silent partners?  
Alex: Silent partners. That is correct.  
AC: What is your game plan?



**Alex:** Our game plan is as follows. We believe we understand where the Amiga fits into the different markets around the world. The one thing that has made Commodore very successful in the past has been the engineering capability of the company, the performance of the product, and the cost. Those three factors have always been successful for Commodore.

We believe that with the engineers that are left and the engineers that could be brought back the same formula could be reestablished. We view engineering as being located in the same West Chester Pennsylvania, sales & marketing would be handled from there.

Now instead of having 35 different companies that are owned by a parent company, we would use distributors in every country to handle that country. That formula would apply all the way from the North American market to the European market.

**AC:** Manufacturing?

**Alex:** Manufacturing for the products that dominate the North American market, such as the A4000 would be done in Alabama, while the A1200 would be manufactured in Scotland.

**AC:** When you say Alabama, are you looking at a third party contractor?

---

“The one thing that has made Commodore very successful in the past has been the engineering capability of the company, the performance of the product, and the cost.”

---

**Alex:** We are looking at a subcontractor to actually manufacture product for us.

**AC:** Scotland is the old UK facility?

**Alex:** That is correct.

**AC:** Obviously what you're saying is good news and bad news. With the fact that it is going to take so long to get product into the hands of consumers, what are you prepared to do to market and keep alive the Amiga name or do you intend to keep the Amiga name?

**Alex:** We do intend to keep the Amiga name. Once the consumer understands what we are creating in the market and the products we are producing, I think you'll see a big turn around. Commodore always lacked marketing funds. In our budget Number 1 is marketing and Number 2 is engineering. That is where the emphasis of the Company is headed. I think you will see advertisements in the US in targeted magazines, videographer magazines, interactive multimedia magazines, and the same thing in Europe. We are finally planning to make investments in the areas which Com-

modore neglected before. We're also going to go back to the existing user base and let them know what we're doing and what we're involved in. We need to get them back on board with us. We have a user base of almost 5 million Amiga users out there and these are the best Amiga salespeople on the face of the earth. If they see development and the right direction for the Amiga, I think you will have a sales force of 5 million.

**AC:** The Amiga user as a whole is quite determined, love their machines, and always hated Commodore. How do you plan on turning this around so they don't hate you, better marketing?

**Alex:** Not only better marketing. One of the problems that Commodore always had was that once they sold a computer to an end user, they thought the sale was over and done. They never listened to the end user and never wanted to hear from them again. We are going to set up an end user advisory committee which will report directly to the board of directors. We will have users telling us what they want from their machines and what they want this company to do.

It's not going to be a company which is run under a dictatorship by one person deciding what the market wants. We will have input from the field. We will have one board position for the US and one for Europe. So we will have two seats on the Board of Directors which the end users report directly to. We feel this will give us a sense of reality when it comes to the computer market.

In addition we understand how important the developers are. The first thing we will announce after acquiring Commodore will be a developer's conference here in the US and a developer's conference in Europe. We want to make sure the developers are back on-board with us. They are crucial to any computer being a success.

**AC:** You gave the trustees 4 to 6 weeks if they do say yes. That puts you in the middle of September, is that correct?

**Alex:** That's correct.

**AC:** Although actually it could be as late as the end of September. Where does that put you on the schedule, when would you be able to make the announcement, as soon as they tell you or will there be some things that have to be checked out first?

**Alex:** The second our bid is accepted, we will make a public announcement. There will be a lot of legal work to make sure the patents, copyrights, and trademarks are free, clear and transferrable. That process might take three to four weeks of lawyer to lawyer work. In the interim we will be able to put the marketing plan into effect, announce the developer's conference, begin to book advertising space, and move forward. Even though it will hinder us for four weeks begin to get the public behind us again.

**AC:** Currently there are no plans to join forces with the UK management buyout, this is an either/or situation at this point?

**Alex:** At this time each party has gone their separate direction and we will continue to do so unless something is brought to our attention.



AC: You're not totally discounting the opportunity?

Alex: In this business with Commodore, you never discount any opportunity.

AC: So where do you feel this company can go? Do you have projections of what you could be selling a year from now?

Alex: I think we can bring it back to the glory days of Commodore. It's going to take a lot of hard work. I think we have to understand that the Amiga is a different machine. We don't want to be an IBM, we don't want to be a Compaq. We want to be the best graphic computer on the earth. We want to attract the creative artist, the hobbyist, the game player, as well as have the best multimedia applications for our machine. In order to accomplish this, I think marketing and engineering have a lot of work ahead.

AC: So you intend to turn engineering loose and listen to all the projections and possibilities that they can come up with, is that safe to say?

Alex: That would be safe to say.

AC: What would you like to get across to the Amiga users out there?

Alex: One thing we bring to the table is that we understand the technology. We've used the technology since 1985. We have been associated with Commodore since 1979.

market share in Europe. As a matter of fact with these people at liberty to do whatever is necessary in those markets I would expect our market share to increase.

AC: Which is one big reason why you're doing the developer's meeting over there also?

Alex: That's correct.

AC: Outside of the fact that it is taking so long for the trustees to decide, do you see any problems ahead? Other than the legalities, movement, so forth and just the fact that things take time, are there any complications, things that you see trouble with or things that give you concern?

Alex: No, I really don't. It's been really a simple equation of what the company is worth, making sure the legal hurdles are cleared, and making sure the money is in place. Once all those things are lined up, it's a matter of letting the legal people do their job.

AC: In your mind, do you perceive that the UK market is still going to be a games market, while the US market is a graphics and video market or are you going to introduce CD32 here? Are we going to see real support for development as a game platform? What are your immediate projections? I understand you spoke about an advisory board so it would not be one man's decision,

---

"Our plans call for offices in the UK, Germany, and Italy. We have talked to some of the key people within the Commodore European operations. These people have been very successful in what they do and they have agreed to join forces with us to make Europe as successful as it was in its heyday. So I do not expect to lose any market share in Europe. As a matter of fact with these people at liberty to do whatever is necessary in those markets I would expect our market share to increase."

---

We have seen every place Commodore has failed and why they have failed. We understand why the user is frustrated. If we are given the opportunity and some support, I think you will see an incredible turn around in how a company responds to its customers. We can work together both as a manufacturer and a customer to make something great.

AC: When we interviewed Mr. Pleasance he commented on the fact that 85% (his term) of the market was in Europe, if we agree that these are the correct figures, you are not going to turn your back on the European market. How are you going to handle the European market, just through distribution or are you going to have an office over there?

Alex: Our plans call for offices in the UK, Germany, and Italy. We have talked to some of the key people within the Commodore European operations. These people have been very successful in what they do and they have agreed to join forces with us to make Europe as successful as it was in its heyday. So I do not expect to lose any

but it still is one man's vision that starts everything. What do you envision?

Alex: When it comes to the game console market in the US, we are at a disadvantage when compared to Sega and Nintendo. However, the CD32 offers some incredible technological advances to which neither of the other units come close. Since we are not going to have the same marketing dollars as Nintendo, we need to sell our units on price and performance. To that end, we have been negotiating with distributors of electronic products, and we have commitments so far to put the CD32 in 15,000 retail outlets in the US.

AC: 15,000!

Alex: Yes, 15,000 which shows you what can be done by picking up the phone and having conversations with people. Having somebody go out and sell the product that people believe in. So even though our dollars are less in the market, the potential of the product in this market hasn't even been approached. On the A4000 or video unit, I think the prices have to



come in line with comparable PCs even though our machines are much more powerful. I think videographers in the professional market want to buy machines from people they trust and understand the market. The A4000 doesn't have enough slots to meet the needs of the average videographer, movie studio or even the hobbyist. New products have to be brought into this line.

AC: You're talking about the 4000 tower?

Alex: I'm talking about the 4000 tower.

AC: Isn't that available though. Wasn't that finished?

Alex: The 4000 tower was finished. It was shipped. It has gone through FCC approval and would be one of the first products we would bring onto the market.

AC: Just as an aside there was a rumor that Commodore had failed to pay a royalty fee which created an injunction against them, not allowing them to ship machines. Would that be a problem?

Alex: Yes, there was an injunction against Commodore and yes new management would have to have that resolved before shipping new product into the US.

company is moving forward. We have a few surprises which could be brought along quickly.

AC: This will be the Amiga by CEI? CEI will be the parent company?

Alex: At this time, that is the decision. That could obviously change.

AC: Now just a little background. You've been in business how long?

Alex: We were selling the Commodore Pet 2001 with the "chiclet" style keyboard, most people are not old enough to remember that machine which is quite scary.

AC: I never used one but I was around.

Alex: I sold the Vic 20 for Commodore which was very successful. Then we were marketing the Commodore 64. We manufactured game cartridges and a modem cartridge for the Commodore 64. We were actually the first producer of game cartridges for that platform. With the advent of the Amiga, we became an Amiga retailer. We were then assigned the exclusive distribution of Amigas in Latin America. Based on our performance, Commodore asked us to perform the same role

---

"I hate missing Christmas in the US, but I think the US market needs more preparation. We need better bundles, better packaging, and I would rather do a good job than a half hearted job."

---

AC: You would have to make a new agreement with whoever owns that patent?

Alex: That is correct. These negotiations under way. So I don't see a problem there.

AC: How soon until the UK starts to see CD32s?

Alex: We have enough CD32s finished right now for that market. There will be sufficient supplies to meet any Christmas demand.

AC: In Europe?

Alex: In Europe.

AC: But you're not intending to bring any into the US until February?

Alex: We won't have enough units available. I hate missing Christmas in the US, but I think the US market needs more preparation. We need better bundles, better packaging, and I would rather do a good job than a half hearted job.

AC: How can the Amiga community help you or assist you to get the word out if you receive the go ahead?

Alex: Just by getting the word out and letting everyone know there is new management that believes in the Amiga. By showing someone what their Amiga can do. I think that's the most important thing to getting sales going. Also let the developers know you are in the market to buy product again, they need to know the consumer is ready to buy product and support the market.

AC: Do you foresee a marketing campaign before you have product?

Alex: Yes, I would introduce auxiliary products immediately like the 3.2 operating system to demonstrate that this

in the US market and in a very short period of time we became one of the largest Commodore distributor worldwide.

AC: So you feel you have the background to make this work as far as distributing and knowing what consumers and dealers need.

Alex: That's correct. We're ready to explore unique opportunities with the product. We believe that the sale of one unit is as important as the sale of 1,000 units and we'll work just as hard for each sale.

AC: What about the engineers in Norristown? Are you willing to promise them the moon and a couple of planets to stay?

Alex: Most of the engineers who are up there don't need the moon. They are there because they believe in the Amiga. If they can believe in the leadership, they are willing to work 24 hours a day to make the Amiga successful. We are willing to promise them someone who will listen to them and somebody who understands how important they are. I think that is a lot more important to those guys than the moon.

AC: Any last words or anything I might have missed you would like to add?

Alex: I think you've pinned me up against the wall and have gotten everything! (Alex laughs.)

•AC•



# VideoStage Pro

*Reviewed by Douglas J. Nakakihara*

Oxxi's VideoStage Pro (\$179.95) is a new multimedia authoring system for creating interactive and non-interactive presentations. It's ideal for kiosk applications and with a genlock, VSP's font handling capabilities make it an awesome video titling program.

## Main Screen

A "show" consists of "slides" containing graphics, titling, sound events, ARexx calls, genlock events, or play-control events. Thumbnail versions of each slide, with a user-definable name, are displayed on the main Storyboard screen. A slider gadget can be used to scroll through the Storyboard, if it has more than the maximum displayable thumbnails—15 for a standard size screen. Small transition icons separate the thumbnails. Transition and slide times are also displayed, with resolution to one video field (1/60 of a second for NTSC or 1/50 for PAL). Two shows can be in memory simultaneously and you can instantly swap between them.

Arranged vertically on the right side of the screen are icons representing the various types of slides. A user-definable tray of 20 transition icons appears at the bottom of the screen. A show is created by simply dragging icons onto the Storyboard. You can temporarily store and retrieve slides off the Storyboard in the Gallery or drag unwanted slides into the trashcan.

## Transitions

The full bounty of available transitions are displayed on their own window. Over 60 different transitions are provided, including wipes, fades, and scrolls. You can even do transparent scrolls, where, for example, see-through text scrolls over or behind an existing slide. (Currently, this feature doesn't work properly on non-AGA machines.) A small animated example of the currently selected transition is also displayed with a short description—detailed context-sensitive help is only a click away.

Transitions have a special record mode that lets you automatically set slide timing using the mouse as a show plays. This is great for syncing graphics with audio.

## Time Line

From the Storyboard, you can go to the Time Line. Here you can graphically adjust the timing of all of the slides and rearrange the play order. Since different types of slides may run in parallel (e.g., graphics and music), there are separate tracks for each type. For precise editing, zooming capabilities are provided. Most of the editing functions available on the Storyboard can be used here.

Not only does the time line show you the length of slides, but also transition and overhead lengths. Overhead items include file loading time and object movement preparation.

## Graphic Slides

IFF anims and pictures can be loaded as graphic slides. With anims you have full control over looping, playback length, speed, etc. VSP ships with some pre-made images to use as backgrounds and Scala backgrounds will also work. A slide's resolution, screen mode, and depth can be changed at any time.

VSP can also generate gradient backgrounds (stunning with AGA). There are different variations and the colors are user-definable. It will also make tiled backgrounds using IFF brushes. Several are provided and you can even make your own. JEK's ProFills is a good source for additional brushes.

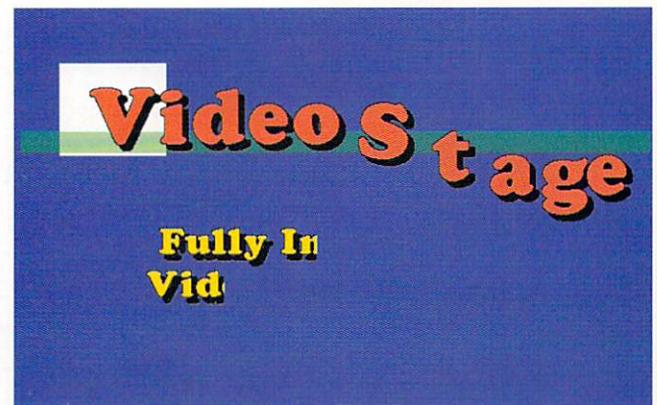
## Objects

Text as well as nine different built-in objects can be placed onto a slide. Shapes include rectangle, ellipse, star, heart, and arrow. Outline, drop and cast shadows, and embossing effects are available. The objects can also be rotated and sized. Four levels of antialiasing are featured. Any combination of objects can be grouped together to allow application of various effects to a set of objects. Outline width, shadow depth and direction, and font line spacing and kerning are adjustable. Additionally, a "brush bank" capable of holding 20 IFF brushes is featured. Brushes cannot be resized, however.

Interactive buttons can be easily placed on a screen. A button can be a rectangle, brush, and/or text. Buttons can trigger ARexx scripts, sound, or transfer control to another event.

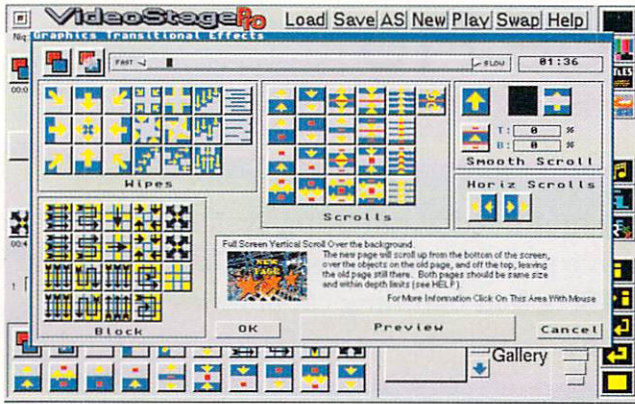
## Color Palettes

To accommodate the fact that a slide can consist of several elements (e.g., background, text, brushes, etc.), each with its own colors, VSP features a complex dynamic color palette scheme. A slide's color palette is divided into two parts: "fixed" and "assignable." Generally, fixed colors are adjustable by the user and used for text and shapes, and assignable colors are for the backgrounds, brushes, gradient and antialiasing colors, etc.—"assignable" refers to the fact that VSP assigns the colors. The number of fixed colors generally depends on the maximum number of colors for a particular slide, but this can be set manually.



Flying Text: An Example of text actor in flight.





The Slide Transition requester.

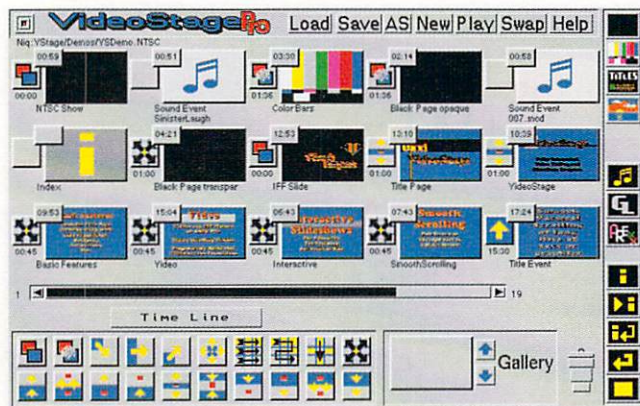
The colors for a background image can only get into the assignable range, if the image is loaded as a pattern (not as a picture). Colors used in an IFF brush go into the assignable area, unless they already exist in the palette. If a brush uses a fixed color and that color is later changed by the user, the effect may only be temporary. VSP may subsequently reassign the brush color. If all of the assigned colors are used up, the closest existing colors are used.

If an image is loaded as a pattern, its resolution should match the slide's, or it will be repeated to make up the difference. If an image is loaded as a picture, then the slide assumes that image's resolution, depth, and color palette, and the slide's entire palette becomes fixed.

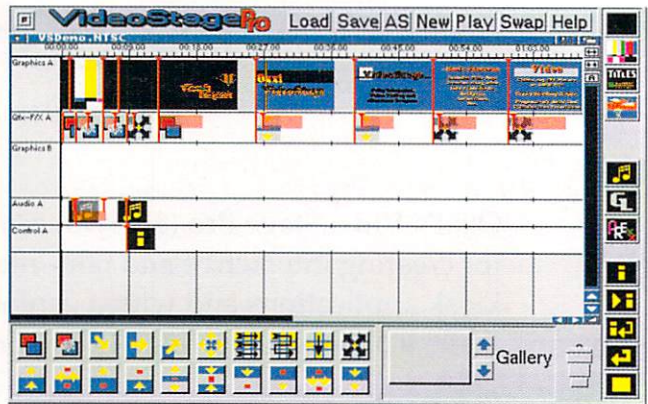
## Acting 101

One of the true highlights of this program are its object transitions. Any object, brush, text, or button can appear on the screen using one of over 60 transitions. Animated things are called actors. VSP has a cool feature that lets an actor come in a piece at a time. Text can automatically fly in one letter at a time or using the grid mode, the actor is divided into pieces based on a user-defined grid. Moreover, you can overlap the pieces so that several are moving at the same time. This accomplishes the transition faster while still retaining the effect. The pieces can optionally be made to appear to grow as they fly on. Actor animation can be previewed frame by frame using tape recorder-like playback controls, plus a scroll bar.

A very unique aspect to some of the actor-moves is an overshoot and return effect. The object can fly in and overshoot its destination—just a bit—and then come back to the correct spot, as if



The Main Storyboard screen.



The Timeline screen.

connected to a rubber band. This gives these transitions more character than achieved with straight-forward wipes. VSP includes some handy tools for quickly arranging the location of various objects as well as their play order.

## Titling

Any Amiga font can be used including color fonts and outline CG fonts. Text can use gradient fills and be styled with bold, italic, underline, outline, and drop and cast shadows. There are three levels of antialiasing available.

Text can be manually placed on a screen, or automatically justified. ASCII file import is featured and will automatically size the slide to fit the amount of imported text. This is a godsend for doing scrolling credits. Furthermore, a special Hollywood-style alignment is featured where text separated by a tab are left and right-justified using a different font for each side.

## Audio

VSP supports 8SVX samples, including the programmed-playback format. This is where a single sample is programmed to play various parts in a certain sequence. The only program I know of that supports this is Oxix's AudioMaster IV, though someone told me it is part of the IFF standard. It is more or less what is being done with music modules and VSP also supports Noisetacker, Protracker, and Soundtracker formats.

## When You're Hot, You're Hot

VSP will automatically inform you when you are using colors that are too hot (i.e., illegal) for NTSC and PAL video standards. Color palettes are fully editable, so you can bring any graphic within standards.

All standard Amiga displays are supported, including overscan and virtual screen modes with auto-scroll. VSP is compatible as much as possible with 24-bit graphics cards, but the actual show should be displayed on a standard Amiga screen. ECS chipset genlocks, GVP's G-Lock, and Digital Creations' SuperGen are also supported.

## Saving

There is a special save option that will save all subordinate files, or user-selectable groups of files, to a single directory. Even the fonts can be included in the save. You then create a small ASCII config file and set the icon tooltypes so the player program can find all of the relevant files. This allows you to create transportable floppy-disk shows. For larger shows, a Syquest drive would work nicely.

(continued on page 27)



# IMAGINE 3.0

*Review by Marc Hoffman*

Difficult to believe, but true, is the fact that personal computer 3D rendering software has grown so powerful that it is now rivaling and even conquering areas once dominated by \$70,000 - \$100,000 workstations. At one time content with simple image and procedural texture mapping, the 3D artist is now faced with particle system animation, lens flaring effects, depth of field, and a myriad of other features never even heard of a few years ago.

Since its last release of version 2.0 over two years ago, Imagine from Impulse, Inc. has badly needed a face-lift to keep pace with this incredible explosion of new features on competing products. In many ways, it has done just that. With the new animation tools, coupled with the new rendering tools, Imagine 3.0 can play with the best of what's out there. But even with all this power, there are still some places where some cleanup work is in order.

So what's new in Imagine 3.0? First, the program supports the 68040 chip, with all of its caches turned on. A little publicized fact was that Imagine 2.0 did not function fully with the 68040; the copyback data cache had to be turned off, or the program would crash the machine. Disabling the copyback cache reduces 68040 performance, and as many 3D users know, slowing down the computer while rendering an animation is not at all desirable. So, by supporting the 68040 chip's copyback cache, the software naturally runs faster. Another general enhancement is the added support for the AA chip set. Now, instead of displaying images in the standard HAM and 16-color hi-res modes of the ECS and original chips sets, users of A1200 and A4000 computers have the option of using 256-color register and 262,144-color HAM8 modes. A third feature that is nice to see crop up is a very well-done manual, right down to the spiral binding so that it can be laid flat on the desk.

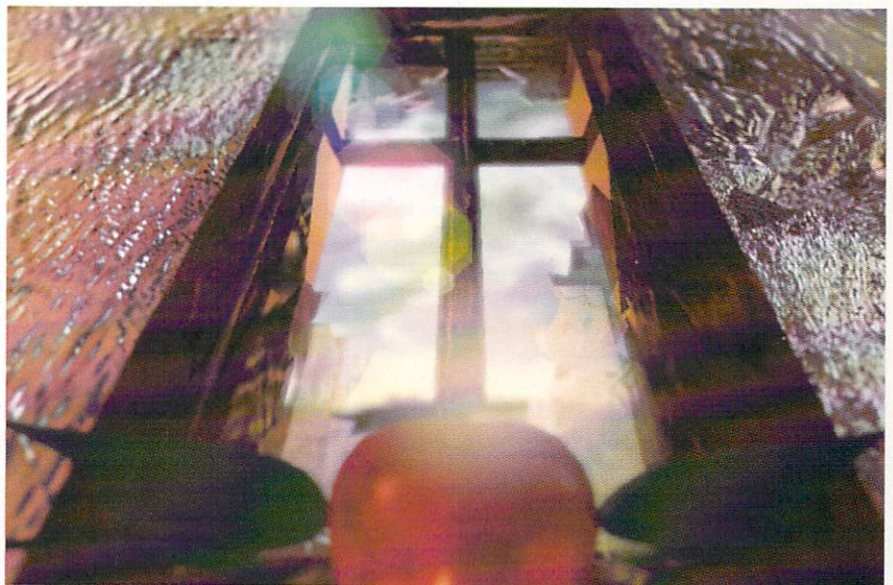
In the area of rendering and animation, many new enhancements and features have been implemented to increase the program's power. Just some of these include: new textures, lens flare effects, global "haze" effects, depth-of-field, new light shapes

and light textures, a spline editor, particle systems, new ways to control acceleration/deceleration, "bones," and a new upgrade policy.

Starting with the new textures, Impulse has added a very high number of high quality realistic textures; 100 of them, to be exact. What makes these textures so exciting is that they are modeled after real-world phenomena, ranging from concrete to electricity (Figure 1). In previous versions of Imagine, the user was limited to four image maps and four procedural texture maps per object, unless other axes were grouped to the main object and told to apply their textures to the main object. This process of adding image and texture maps can become quite cumbersome and very inconvenient. In version 3.0, the user can apply as many textures and/or image maps to the object as desired, limited by memory constraints, of course.

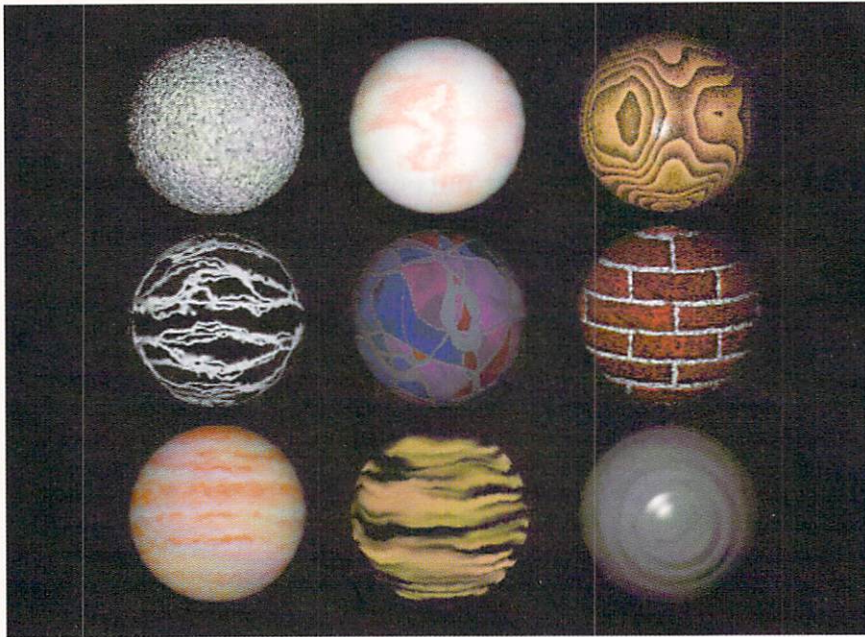
Imagine 3.0 now supports lens flaring effects to simulate the way light behaves on the outside surface and inside areas of a camera lens. The user can specify which lights will flare and which ones will not; the intensity, the size, and spacing between the flares; and the number of octagonal and circular flares to produce in the image. Along the lens flare vein, Imagine 3.0 can now produce a global haze. When applied, this effect will surround any bright object with a haze of light, based on a predefined color.

One feature that I for one am really happy to see added to Imagine is the ability to simulate depth-of-field. Due to the perfect nature of the camera "lens" in previous versions of



The Window of Life  
created with Imagine 3.0





**Figure 1:**  
These textures are modeled after real-world phenomena, ranging from concrete to electricity.

Imagine, every object in a given scene was rendered in perfect clarity and focus. Unfortunately, this perfection can lead to imperfection in many images and animations, as the artist may wish to blur the background or foreground for the purpose of emphasizing some area of the image. In a real camera, the lens is not completely perfect; due to the ability to increase or decrease the size of a camera's aperture, the photographer can decrease or increase the depth of field, respectively. Imagine's rendering engine can now simulate this effect, and the results are very convincing.

For interesting lighting effects, Imagine 3.0 has new light types, and some new textures to go along with them. The actual shape of the lights can be changed to square or circular; the advantages of these shapes becomes apparent when the light rays are forced into a parallel mode, more commonly known as a spotlight. A square or circular area is projected onto a surface. To maximize the aesthetic effect of these lighting schemes, Impulse has added four lighting textures: French Window, SoftEdge, Strobe, and a Venetian Blind texture. The French Window and Venetian Blind textures simulate the shadow that would be cast if light were shining through these types of windows. The Strobe texture cycles a light from one color to another. The SoftEdge texture, contrary to its name, does not cause all shadows cast to have soft edges. Instead, it causes the edges of a light to be fuzzy in nature. The other two window textures make allowances for the soft-edged look as well.

A new editor called the Spline Editor has been added to aid in the creation of objects requiring smooth, organic curves. The spline-based objects are then converted to polygon based objects, because Imagine is still not able to directly render splines. The objects can be extruded in different ways right inside the editor. Another nice feature of this editor is the ability to load in Postscript fonts. Now, very high quality fonts can be rendered without the distortion of their bitmapped based cousins.

A long-awaited addition to Imagine is the ability to manipulate a particle system. Imagine 3.0 comes through with this. Particles, as handled in version 3.0, can be a set of predefined geometric shapes or custom objects. The software applies these objects to the faces of other objects, and can be oriented in several different ways. Take a sphere, for example. The standard primitive sphere in Imagine consists of 528 faces. If one of the standard built-in particle shapes is applied to the sphere, say the pyramid, then

every one of the faces on the sphere will be replaced with a pyramid. That means that now there are 528 pyramids. These pyramids can then be animated in many different ways in the Imagine Action Editor. They can be made to rain, explode in a timed fashion, emit from the original object (such as a comet emitting a trail of particles), and can be subjected to forces such as gravity and wind. All in all, this feature opens the door for some very interesting possibilities. On the down side, the particles cannot interact with each other on the basis of say, object collision. According to Impulse, this feature takes far more time to compute than it's worth, and so it was left out. But they also say that they are working on a way to circumvent this problem, and that this feature may show up in a later version.

Earlier versions of Imagine allowed for limited control of acceleration/deceleration of an object along a path. Unfortunately, it was not very easy to create this acceleration anywhere else, such as within an object metamorphosis. All that has changed now. Almost every animated action within Imagine 3.0 can be made to accelerate/decelerate, from a simple object translation to object sizing, to the afore mentioned morph. Objects can now be made to Associate themselves with other objects as well. For example, say that a jet aircraft is attached to a complex spline-based motion path. In order to get the camera to follow the plane (other than behind it) with all of its dips and arcs, a second path would need to be created. However, in Imagine 3.0, the camera could be "Associated" with the plane, and would therefore follow the jet perfectly while at the same time keep the same pre-defined relative distance from the jet throughout the animation.

To round out the power list is "Bones." Having nothing to do with being a 23rd century physician, the feature allows the Imagine artist to form a skeletal structure within contiguous objects. The skeleton is formed by using a series of grouped axes, and faces called "subgroups" are attached to the axes. When the axes are rotated, the faces of the object will then follow. Animated human forms cry out for this feature. Before this feature was implemented, "breaks" between limbs were always present; e.g., the area where the arm attaches to the body. Now, the whole object is contiguous, a covering of triangles that will obey the "bones" beneath them. A problem arises with this strategy, however. In traditional Imagine texture and image mapping techniques, the texture or image was



mapped to the object's axis, which is fine if the object's triangles don't move around too much. Using Bones, the triangles will move, stretch, and distort beyond belief. The result is that the triangles will appear to slide underneath the image or texture. To remedy this problem, Imagine 3.0 can "lock" the image or texture to the triangular faces of the object on the basis of what is called a "state". A state is information stored within an object regarding its grouping, shape, and properties such as color or reflectivity. States can be morphed to and from one another, and therefore the different bones positions can be morphed between each other. Because of the locking to one state throughout the morph, the image and texture mapping information sticks to the individual triangles of the object. That way, no matter how much the object is distorted, the texturing will stay glued to the object, and not its axis.

Impulse has decided to change its upgrade policy. In the past, the company has upgraded the software at least once a year, and between 2.0 and 3.0, the stretch has been over two years. Now, they will offer upgrades about four times a year for a prepaid fee of \$100. I called Impulse to ask them what we can expect in the new upgrade, which should be out by the time this review hits the presses. Here is what the representative told me: New Spline Editor functions, new Stage Editor functions, new textures, better DXF support, and some general clean-up work to make things operate much more smoothly. When I questioned Impulse on the future implementation of AREXX, they told me that no initial plans are being made.

This review would not be complete without some gripes. When I received my copy of Imagine 3.0, I began to notice some strange things happening. First of all, when I tried to do some rendering, the mouse pointer really began to slow down and "jerk" across the screen. I never did quite figure out what was causing this to happen. Another problem I found was that diminished intensity point light sources do not cast shadows, even though they are supposed to, and they used to do so in earlier versions of Imagine. I don't know how this one got passed the debugging team. Also, although the lens flare effect is a very welcomed sight, it just doesn't seem to go that extra step to make the effect complete. What I am speaking of is the "star" flaring effect seen in many LightWave renderings. A call to Impulse reassured me that the star seen in those renderings is not a lens flare, but is instead the effect caused by a special lens filter. But I have seen this star show up in my own photographs, and my camera has no filters of any kind. But even if Impulse's statement is true, that isn't the point; the fact is that the users of the software are going after effect. While Impulse argues semantics, competing products will pass it by. Perhaps adding an entire library of procedural "lens filters" would not only solve the problem of the lack of a star lens flare, but would add numerous other possibilities.

Despite the problems with Imagine 3.0, I for one am not tempted to give it up. The features included in the software are top notch, and with some additions and bug fixes, I believe that the software will be even more complete. Only time will tell.

I would like to thank The Computer Room in Aurora, CO, for the use of their A4000 to finish typing this article. I would also like to thank Ray Ward in McCook, NE, for the use of his A4000 to render the opening picture to this article.

•AC•

Imagine 3.0  
Impulse, Inc.  
8416 Xerxes Avenue North  
Brooklyn Park, MN 55444  
(612) 425-0557  
Fax (612) 425-0701  
Inquiry #206

(continued from page 24)

## Requirements

VideoStage Pro requires a hard disk, 1MB Chip and 2MB of Fast RAM, and AmigaDOS 2.0 or greater.

## Versus Scala

So how does VideoStage Pro compare to Scala MM300, the reigning Amiga presentation champ? Well Scala is definitely a much more refined product and has more overall features than VSP. Scala's interface is more streamlined making it generally easier and faster to create presentations. Scala also has much greater built-in control over external devices, like laserdiscs, MIDI instruments, etc.

Scala does more behind-the-scenes work with palettes, which allows better transitions between slides with different resolutions and depth. (VSP will sometimes have to fade to color 0 first before doing a transition.) Scala also lets you import brushes, add styling, and resize them. Objects can also wipe off a page, as well as on with Scala.

Scala lets you play music and anims directly from a hard drive, and supports special anim formats geared for faster playback, features VSP lacks. Scala also has a full AREXX command set, where VSP can only execute AREXX scripts.

However, VSP has some great features that you won't find in Scala. These include the overshoot and piecemeal object transitions, transparent scrolling behind objects, animated demo transitions, scrollable preview, timeline, on-line context-sensitive help, multiple in-memory shows, and gradient background generation. VSP is considerably less expensive too: \$180 vs. \$400 for Scala. Best of all, VSP is not copy-protected in any way! The VSP player program is freely-distributable. Both the Scala main and player programs are dongalized.

## VideoStage Pro+

Oxxi will be releasing VSP's big brother VideoStage Pro+ (\$499.95). In addition to all of VideoStage Pro's capabilities, VSP+ features the ability to update remote player sites using modem, serial port, or network connections. Batch file transfers can be scheduled for any time. Time-sensitive events can be set to only show on certain dates, days, and/or times. VideoStage Pro+ also supports encapsulated Postscript clip art. Interactive features, including AREXX implementation, are much more robust than in VSP. (VSP+ is to VSP what Scala InfoChannel (\$2,500) is to Scala MM.)

## A Lot To Like

There is a whole lot to like about VSP and I've just touched on its many features. It's applications like this that exemplify how powerful the Amiga really is. Competition is good, and VSP and VSP+ will provide some for Scala, especially considering Oxxi's aggressive pricing.

•AC•

VideoStage Pro  
Oxxi, Inc.  
P.O. Box 90309  
Long Beach  
CA 90809  
310:427-1227  
Inquiry #208





# bug bytes

by John Steiner

tips

hints

workarounds

suggestions

updates

fixes



## Audiomaster IV and the A4000

Ray Dabkowski of Chesterland, OH sent EMail with a note regarding Audiomaster IV, the Perfect Sound digitizer and the Amiga A4000/40. He writes, *I'm using Audiomaster IV with a Perfect Sound digitizer. On the 4000/40, it samples okay, but plays back the audio at a fast rate. I called Oxix and asked if the new update (for AmigaDOS 3.0) would fix this problem, and they said "no" and coldly told me to use some other product! Anyway, I've tried tweaking the 'CPU' setting to accommodate faster processors, but it makes no difference. Anyone else report this problem?*

At this point, no one else has reported the problem or any possible work-arounds. How about it readers, any ideas?

## 1960 Monitor Driver Revisited

James R. Ollick and Dan Knowlton both wrote via EMail to suggest another alternative monitor driver originally mentioned in the June, 1994 Bug Bytes. Mr. Ollick writes, *I have a 4000/040 and a 1960 monitor. I have had the same problem with DblNTSC not centering on my monitor. I used MonEd, a PD program that has sliders that let you change the position of the screen and other parameters, then saves the changes to the monitor file. I suggest copying the monitor file first, to save an unaltered version just in case. MonEd can be found on CompuServe. It worked just fine for me. Dan noted that he found the program on the ImageNet BBS, (401) 822-3060.*

## Slow Spin-up Problems With A4000 Hard Drives

Mr. Ollick also has a problem with an IDE hard drive. He writes, *I added a second hard drive to my 4000. It is a 540MB IDE Seagate. It takes longer to spin up than the 4000 allows itself to check for hard drives connected to the system, therefore I have to warm boot in order to use it. There are several PD programs (i.e.: BATMEM) for the 3000 to change the time the 3000 looks for hard drives. They change the battery backed RAM (or is it ROM) and make it look for hard drives for 2 seconds, thus resolving the problem. These programs do not work on the 4000. I was wondering if there was someone that knew of a 4000 specific program to fix this or if there is a programmer out there that could address this problem. Posting this problem on CompuServe has revealed that there are others who have this problem with large hard drives on their 4000s.*

## Quarterback Technical Support

Gordon Hadyk sent EMail regarding an upgrade note for Quarterback in the July 94 Bug Bytes. He writes, *I read in the July issue of Amazing Computing about the Quarterback 6.0.1 upgrade that allows an A2000 with Supra Turbo 28 to work with Quarterback using compression. I have such a configuration and Quarterback 6.0. Unfortunately, Central Coast Software/New Horizons seem to be gone. Do you know of any way to get a 6.0 to 6.0.1 patch, or a copy of 6.0.1?*

Any comments from anybody that might know of either Central Coast's whereabouts, or of the possible licensing of their products to any other vendors?

## Multiple Hard Drives and the A3000 revisited

John Korczyk sent EMail with a simple solution to adding an additional hard disk internal to the A3000. He writes, *I added a hard drive to use with my Golden Gate card. I just placed it on top of the floppy drive. I used a thin piece of plastic screwed to the normal mounting holes on the hard drive to keep it from moving around and slid it down between the floppy drive and the support for the daughterboard.*

## Chinon High Density Drives and the A4000

Terry Booher of St. Petersburg, FL sent a fax regarding comments by other Bug Bytes readers who have noted their use of Chinon 357 drives in Amiga 3000 CPUs. He writes, *Recently I had a group of individuals who came in and purchased the Chinon 357 1.44 drives. After several attempts at trying to get the drives to work, I contacted Chinon. At Chinon I talked to a Mr. Noguchi who told me the drives would not work as a 1.44 in the Amiga. I then returned to the group and asked them where they got the information. They referred to an article you wrote in Amazing Computing August 93 issue. In an effort to try and help them I told them I would contact you.*

In addition to the August '93 issue, I also received reader mail regarding the Chinon 357 drives that was published in the February 1994 issue. In that issue, Mark Odell identified two specific models, the FB-357A (for the A3000) and the Chinon FZ-357 (for the A4000, but it will fit in the A2000). It would appear that the 357 series drive has more than one design, some of which are Amiga compatible, and some of which are not. If you have found Chinon drives that work in your Amiga, let me know the specific model number, being sure to include any prefix or suffix letters, so that others wishing to order drives can obtain a working replacement.



## A1000 Floppy Drive Issues

Pat Fish of Utica, NY writes regarding the A1000, Workbench 2.x and floppy drives. He notes, I'm running an A1000 with version 2.04 of the Kickstart OS, ZKicked into RAM (no ROMs) and WB 2.1 with a DF1: (AirDrive) and Spirit Technology's 8MB X-RAM card and their HDA-506 hard-drive interface using a 130MB RLL hard-drive. The HDA-506 lets the Amiga use IBM XT hard-drive controllers like the Scientific Micro Systems, OMTI and DTC controllers. This let early Amiga 1000/500 users use cheap IBM hard disks.

Though I have far fewer crashes under 2.1 than I did under 1.3, I have been experiencing the floppy R/W errors mentioned in the past few AC Bug Byte columns. Mostly the errors are during a write; the system complains about sectors 880, 881, 882, etc. This happens so often that my floppy drives are nearly useless for writing. Though it happens before a disk is full, I get the (unscientific) impression that a full disk exacerbates the problem. I'm using SetPatch 1.38 (24-Sep-90), should I have a higher version? I bought this system used, so I can't be sure that every command used (like SetPatch) is 2.1 software (maybe SetPatch 1.38 is a 2.04 leftover?). Despite what's said on page 30 of the July '94 issue of *Amazing Computing*, typing in "SetPatch" doesn't get me a list of patches. It merely says that SetPatch is already installed.

Extra note: Due to the Spirit system's limitations I have to boot off the 1.3 ABOOT: partition first. My Startup-Sequence ZKicks 2.04 into RAM, then reboots.

Reading old disks written under 1.3 seem to work fine. I never use the FFS on floppies. The occasional read error seems only to occur on floppies which have previously had the above-mentioned write errors. Sometimes clicking on retry works; other times hitting cancel allows the write operation to finish with no sign of error (strange eh). I have my other A1000 which I swapped in place of the second-hand A1000. The same errors occurred so I really doubt that it's a CIA chip problem, as has been hypothesized by an AC reader. Incidentally, my original A1000 has an internal Spirit Ram/Clock board with 1.5 MB installed. It also has the PLA chips on the Kickstart daughterboard properly grounded—just in case. It's noteworthy to repeat that both A1000s act the same. (I doubt it matters but the only programs in my WBSStartup drawer are: AssignX ClickToFront DragIt PowerSnap SM ToolsDaemon.)

I wonder if anybody has tried testing DiskCopy to see if it runs into the same sort of errors. If my experience is any benchmark, the problems don't show up during the diskcopy, but only after you try to use the copy of the disk. Maybe other AC readers can test this, so we can track down the root of this 2.1 Floppy problem once and for all.

Any comments, readers?

## More Comments on WB 2.1 and Floppy Drives

Pat Fish also notes, One reader claimed that 2.1 increases the step rate of the drive heads, causing the problems. This seems unlikely for several reasons: The early Amigas (all 1000's) had high quality drives which could handle exceedingly fast step rates. Later Amigas weren't always as lucky. Incidentally many earlier DD drives have NO trouble using a HD floppy as a DD floppy. Later DD drives have reliability problems when using these HD floppy disks, assuming they can even format them.

The PD "StepRate" program reduces the number of cycles between step-pulses from 3000 down to 1200. The change was very audible: the drives went from the usual Amiga sound of "gronk gronk" to "biz zip". I have never seen an A1000 have problems with the low step rate of 1200 cycles. Most 500's and 2000's and the models that followed them require their step rates be no lower than 2600 to 1600 if they're lucky. If one replaces the 1000 drive with a newer model, the low (faster) step rates may cause errors (and HD floppies stop working reliably as DD floppies).

I have personally used "StepRate" at it's minimum value of 1200 on both of these A1000s (the original is a 1985 non-EHB model) under KS 1.2/1.3 and WB 1.2/1.3. Never have they given me R/W errors. Nor have any of my 1000-owning friends who use copies of my customized WorkBench disk. My A500 with KS 1.2 and WB 1.3 however, can't take a step rate under 2600 without occasionally running into a problem. I used to sell Amigas, and the 1000's seem impervious to low step rates.

The step rate is a big factor in giving the Amiga it's distinctive drive noise. 2.1 actually sounds like the step rate is SLOWER, not faster. At worst, if it does lower the step-pulse delays, it's not doing it by much. Certainly not enough to account for these errors.

When multitasking w/floppy drive activity (under 2.04 and above) the drives seem far less responsive than under 1.3. This may imply that something in the OS was changed that gives the drives somewhat lower priority. Even checking for a disk and reading the disk.info is slower. If you're doing something, and insert a disk, it can take surprisingly long for the Amiga to notice it, read the disk info and place it's icon on the WB screen. Also, floppy activity can come to a temporary halt under 2.1. (Example: take a disk with a lot of files on it; ShowAll by Filename, snapshot the window to show as many files as possible. Close it's window and eject the disk. Open up heavily populated partitions or other disks and view all by file-name. Now re-insert the previous floppy, open it to get a directory listing. As soon as your pointer becomes available, try moving around one of the other windows. Your floppy will stop as the system re-lists the contents of the window. Even dragging a window around quickly can cause the floppy drive to stall or stutter. It appears that the Blitter's priority modes are being used differently.

I have a theory which is beyond my ability to substantiate. Maybe other developers can look into it. Using SysInfo2, I benched the speed (not drive speed) under KS 1.3 and 2.04. 2.04 seems to "throw away" 10,000 cycles per second, which could explain why 2.04 and above seems so much slower. Amigas using the 7.159 MHz 68000's are visibly slower under 2.04. Users on faster Amigas might not have noticed the change. I also know that the way in which multitasking is handled has become more conservative; supposedly more reliable, which is why multitasking becomes so sluggish and jerky under 2.04 (and above). Often, multitasking seems to halt: when under 1.3 the same actions are nearly fluid. It's possible that the combination of changes to the multitasking prioritization, changes in DMA allocation, and the step rate all combine to give us the errors we 2.1 users have been seeing. I also have a sneaking (but again unsubstantiated) suspicion that HD controllers may play a factor, depending on how they handle DMA. Maybe all 2.X users experiencing the infamous floppy errors could mail in their configuration along with a list of peripherals. If any other users have A1000s with the Spirit peripherals, they can contact me at: [pfish@erc.cat.syr.edu](mailto:pfish@erc.cat.syr.edu) More from Pat next month.

## New Internet Address!

That's all for this month. If you have any workarounds or bugs to report, or if you know of any upgrades to commercial software, you may notify me by writing to:

John Steiner  
c/o Amazing Computing  
Box 2140  
Fall River, MA 02722

...or leave EMail to

John Steiner on Portal  
73075,1735 on CompuServe  
Internet mail can be sent to  
[73075.1735@compuserve.com](mailto:73075.1735@compuserve.com)  
FAX John Steiner at (701)280-0764  
(8:30 A.M. to 5:30 P.M. Central time, Monday-Friday)

•AC•



# ***FRACTAL GALLERY***

*by D.L. Richardson  
Myriad Visual Adventures*

## Travel in an infinite universe with Fractal Pro and Mand2000.

Almost everyone enjoys and appreciates fine art, but most of us don't have the skills to create beautiful pictures. Whether you're in this category or not, welcome to the Wonder World of Fractals. With fractals the computer creates the pictures for us. What we contribute is a good eye for color and composition, and a curiosity to find out "What if".

You may be saying, "What the heck is a fractal?" An oversimplified response to that is: a fractal is a picture created on a computer by mathematics. Fortunately we don't have to be mathematicians to work with fractals because we have software programs which do the calculations for us.

All the illustrations in this FRACTAL GALLERY were created on a basic Amiga 4000 in Hi-Res. Two software programs were used, Fractal Pro and Mand2000. Both programs are very easy to use, and yet their potential for variety is infinite. Since the concept of infinity is so difficult for the human mind to grasp, let's put it in terms we're more familiar with. If every man, woman and child in the world created a different picture with these programs, we would only scratch the surface of the possibilities. Or another way: we could create a different picture for every dollar in the national debt and still find new and exciting areas to explore. Get the picture?

Before you reach for the phone to have me committed, check it out for yourself. You, too, will be amazed.

Fractal Pro and Mand2000 are two very different approaches to the same goal: to create beautiful fractal pictures and animations. However all Fractal programs have one amazing characteristic in common, and that is, every time we zoom in closer on a fractal picture, new details are revealed that were not previously visible. So by zooming in again and again we can discover all sorts of new designs. And that's how all the pictures in this Fractal Gallery were created. In fact, most of them started from the same picture, called the basic Mandelbrot Set.

### **Working With Fractal Pro**

One of the most rewarding ways to work with Fractal Pro is this:

1. Select one of the basic Mandelbrot formulas, (we have 5 to choose from) and render a Lo-Res, HAM-6 picture. Lo-Res renders much faster so we'll stick with it till we find a picture to keep, then we'll switch over to Hi-Res or 24 bit for the final render.
2. Pick a spot on the basic picture that looks interesting and zoom in, to the 16th power. Render again by selecting the DRAW button. In order to zoom in, we position a small rectangle on the picture, then the area within the rectangle will be enlarged to the full screen.
3. Zoom in again and again, until we find shapes and colors that we like. It's possible to zoom in to the 16th power up to 15 times before the picture begins to break up. And every zoom reveals new details, not before seen.
4. If we get more black area in the picture than desired, try selecting a higher color COUNT.
5. When we find a picture with shapes and patterns that we like, select the Julia formula that corre



***Fractal Pro Examples:***  
Creape (left), Eye (below),  
Pedals (below left), and  
Platter (bottom) are all  
examples of fractal art  
created with Fractal Pro.

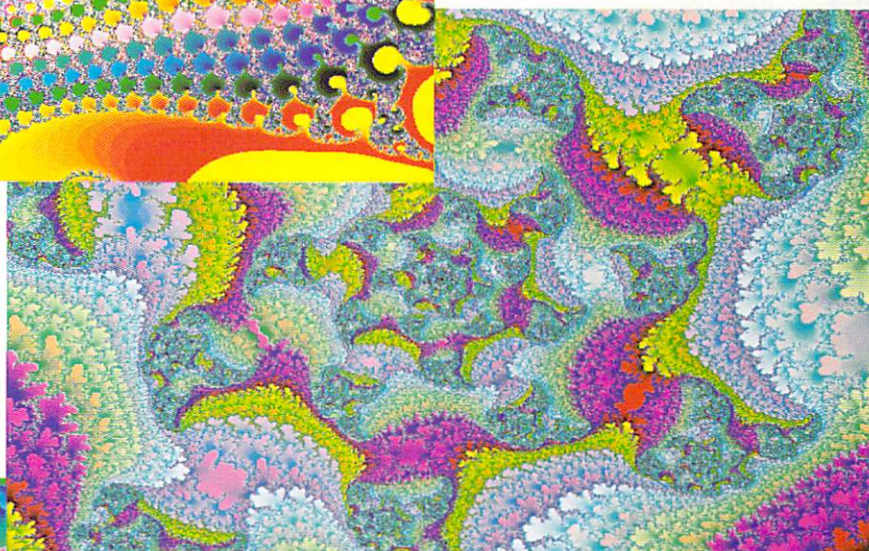
## ***Cerape***



## ***Eye***



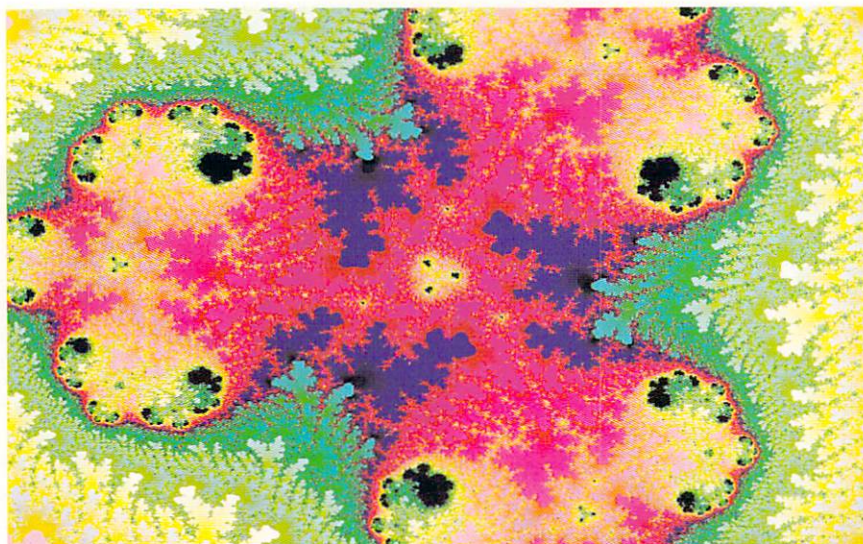
## ***Pedals***



## ***Platter***



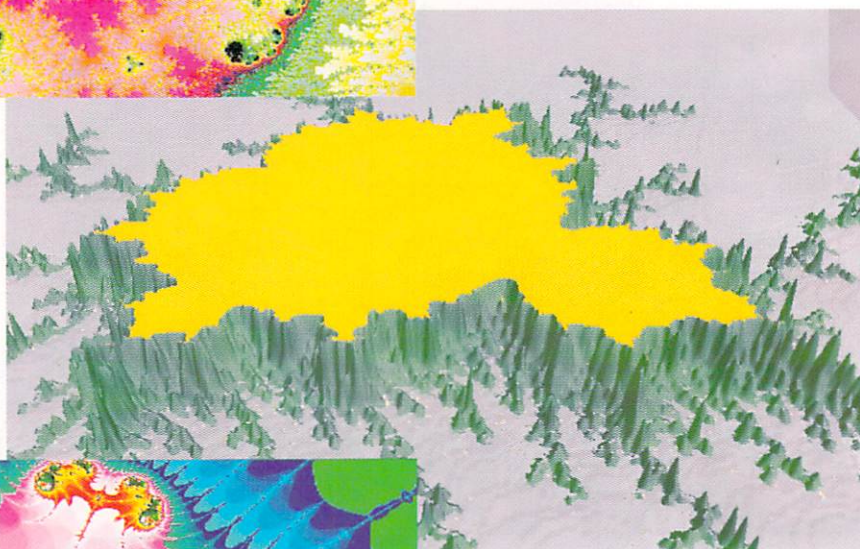




### *Hi Res Ham:*

The images on this page were created with Fractal Pro in Hi Res Ham 6.

### *Nightmare*



### *Mesa*



### *Rosette*



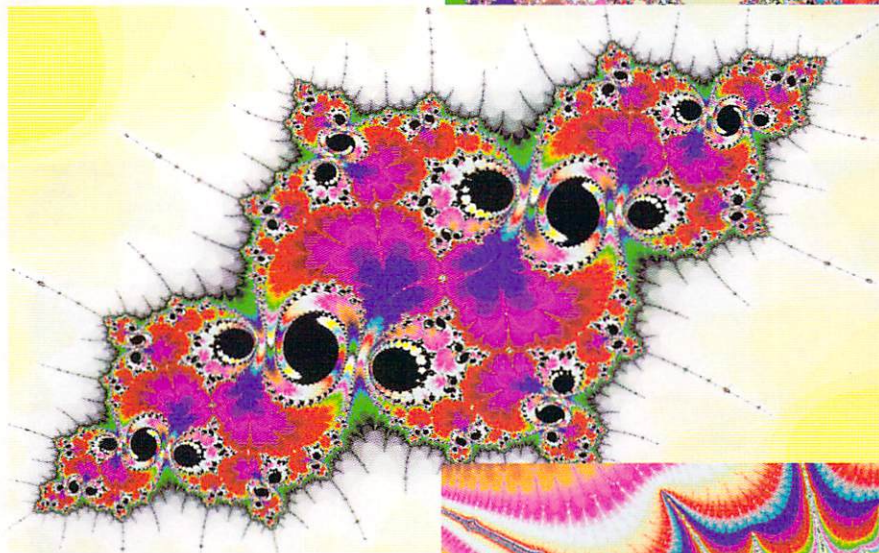
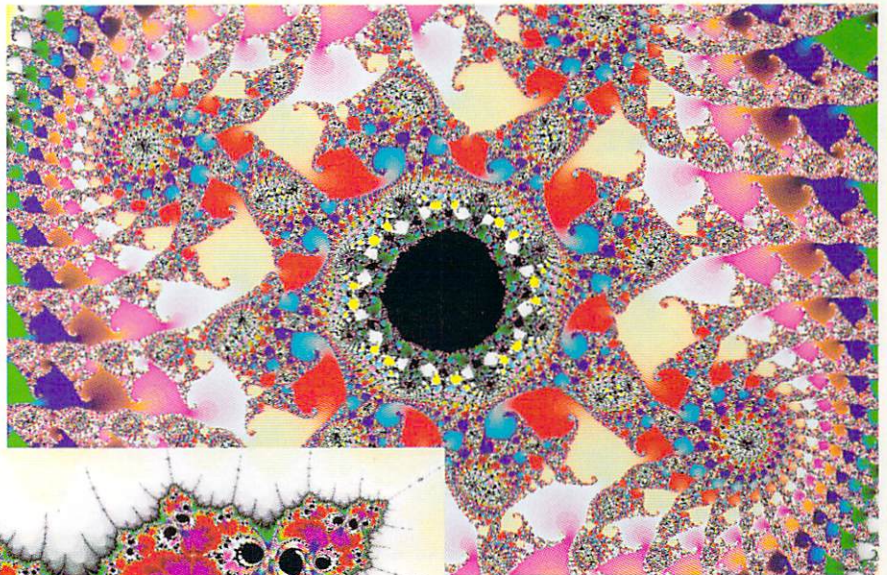
### *Target*



## *Hi Res AGA:*

The images on this page were created with Mand 2000 in Hi Res AGA.

## *Quilt*



## *Broach*

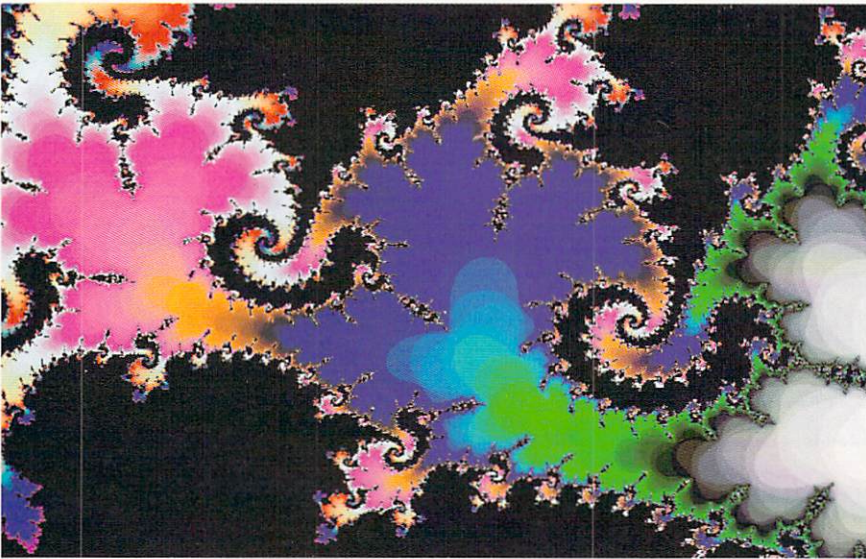


## *Mushrooms*



## *Crossroads*





***Mand2000 Examples:***  
 Abalone (left), Sparkle  
 (below), and Stalactites  
 (bottom) are all examples of  
 fractal art created with  
 Mand2000.

***Abalone***

***Sparkle***



***Stalactites***



sponds with the Mandelbrot set we've been using. It's the Julia, or "J" button beside the "M" button. When changing to Julia do not change any other settings.

6. Render the Julia picture and, if we like, begin zooming in on it.
7. When we're satisfied with the composition, try experimenting with colors. Select one of the 3 basic palettes provided, or the Negative versions of them. We can elect to load a palette from another source, such as a picture made from a paint program. We can also change individual colors in each palette if we choose.
8. When the final picture is saved on disk, it automatically saves the X,Y,W parameters with each picture so that we can load it again at any time and continue working.

Fractal Pro offers several ways to add even more excitement to the pictures by adding motion. The simplest, and one of the most fascinating, is color cycling. Take another look at the pictures in this gallery and imagine 4096 colors cycling. Awesome!

We can also add motion by sequencing a zoom in or out, a straight move in any direction, or a combination of both, using

the screen. Composition is easy to control because the entire picture can be clicked and dragged in any direction.

We can zoom in as many times as we want, the only limiting factor seems to be, the farther in we zoom, the longer it takes to render, and this can be substantial. I have had pictures take up to three hours to render on an A4000 with 040. But that's extreme. Most pictures render in one or two minutes, or less.

A neat feature is that when a picture is saved, it creates an icon which is a small representation of the picture saved. Fun to see, but not particularly useful.

Mand2000 has limited animation capabilities, mostly a straight zoom in or out, but it does so in an imaginative way. It only renders key frames, and all in-betweens are simple screen zooms. This way it can create extremely long zooms in only a few minutes. To quote from ANIMATION 202, "You get the feeling of traveling through a Fractal Universe at warp speed".

People ask which of these two programs I prefer, and truthfully I cannot choose one over the other. I would not part with either. Mand2000 is more fun for doodling and has a wider zoom range, but Fractal Pro offers more control and better animation capability.

Can fractal pictures be used for anything other than framing? Absolutely. They can be mapped onto the surface of 3-D objects, they can be loaded into a paint program, sized and repeated to

---

## Fractal Pro offers several ways to add even more excitement to the pictures by adding motion.

---

Tweening. The other way to animate, and definitely my favorite, is Cascade. Using Cascade, elements of a Julia picture can actually change shape and flow into a totally different pattern. Like everything else in the program, it's easy to do, and the manual clearly explains the steps.

I discovered Fractal Pro while working on my newest instructional video, ANIMATION 202: FRACTAL FREEDOM, and had the pleasure of meeting its creator, Dr. Daniel Wolf, of MegageM in Santa Maria, California. Fortunately for us he is an Amiga user, because Fractal Pro is not available for any other platform. He does continue to upgrade it for the Amiga and the current version is 6.07.

While Fractal Pro is a carefully calculated program with an organized manual and precise control over all features, Mand2000 is more of a carefree, click-for-fun type of program, with no manual. Documentation is available, on screen, by highlighting the selected subject in the menu bar and pressing the HELP key.

### Mand2000 Experiments

What makes Mand2000 so much fun is its simple "double click to zoom" feature. With the pointer in the area we want to enlarge, double click the left mouse button and the picture will zoom in. The exact spot on the picture that was selected moves to the center of

make all kinds of patterns and borders. Or they can be rendered as digital elevation maps for loading into fractal landscape generators. But that's a whole other ball game.

Fractal Pro  
MegageM  
1903 Adria  
Santa Maria, CA 93454  
(805) 349-1104  
Inquiry #200

Mand2000  
Cygnus Software  
33 University Square #199  
Madison, WI 53715  
Inquiry #201

•AC•

Please Write to:  
D. L. Richardson  
c/o Amazing Computing  
P.O. Box 2140  
Fall River, MA 02722-2140



## DesktopMAGIC: The Kitchen Sink Screensaver

By Douglas J. Nakakihara

The Amiga is blessed with many great screensavers in the public domain, available for the price of a download. However, DesktopMAGIC is much more than just a collection of screensavers. It also features the ability to trigger audio clips when certain events occur. I have seen several PD utilities that do this, but DesktopMAGIC's implementation is by far the richest implementation yet.

### Hardware Requirements

DesktopMAGIC runs under AmigaDOS 1.3 and up. 1MB of RAM and a hard disk are recommended, but it will also run if you have a second floppy drive. It supports the original, enhanced, and AGA chipsets, plus graphics cards that have Workbench emulation—my Retina Z2 board worked fine.

### Installation

You can optionally install all of the screensavers or only the ones that will work properly on your system. The installation program will automatically add a line to your User-Startup file, if you want DesktopMAGIC to automatically load when you boot your computer. Although the manual does not mention it, you can also drag the DesktopMAGIC icon to your WBStartup drawer. You must add the tooltype PATH="<DIR>" to indicate where the program is located, like PATH="Work:DMagic".

### Main Window

DesktopMAGIC includes about 30 screensavers referred to as "effects." Most of them include some type of audio when invoked, which makes them infinitely more entertaining.

You'll recognize some of the effects which have been patterned after popular PD screensavers. Some of the more interesting effects include an aquarium, a Tetris-like screen, a floating analog/digital clock, cockroaches, worms, blinking eyes in the dark,

fireworks, flying breakfast food, lightning, melting Workbench, custom message board, puzzle, and starfield. You can also use your own animation or picture with audio. There is a password-protected screensaver that provides a small amount of protection against unauthorized use. I'd like to see a password protection built into DesktopMAGIC itself, so you could have a password on any effect, rather than just one.

The main window contains a scrollable list of all of the effects. Defining the effect to use is as easy as clicking on it. There is also a 'demo' button so you can preview the effect. Some of the effects have their own special options. There is a gadget on this window to bring that requestor up, if applicable. Some effects require you to set their options in the demo mode.

Effects are triggered after a defined amount of time passes without mouse or keyboard input. This time amount is set using a slider gadget on the main window. The volume level can also be set here, as well as the task priority. The task priority comes preset to a low priority to prevent conflict with other programs. There is even a mouse-accelerator option!

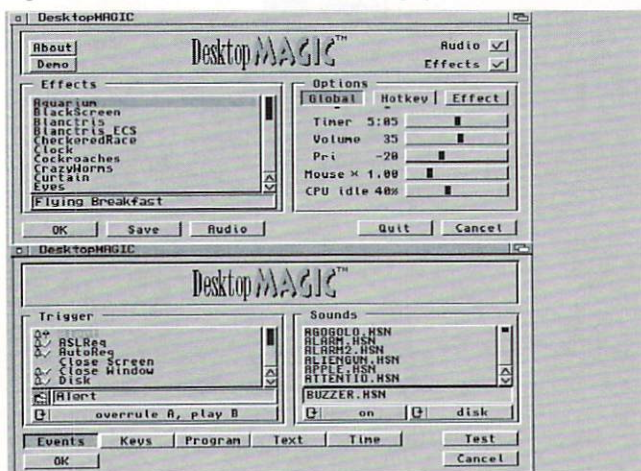
The CPU Idle feature is very nice. All of the effects use some amount of CPU resources. This setting allows you to set a minimum available-CPU-resource level. If at the time the effect is triggered less than the minimum is available, a black screen is used in lieu of the effect. This screen requires no CPU usage.

### The Manual

The 44-page manual includes detailed information on every effect. This includes a description of the effect, explanation of its options, information on CPU usage, and what displays the effect is compatible with. The color cover gives the product a very professional look.

### Audio

One of my few disappointments with DesktopMAGIC is that it doesn't use tracker-style mod files (i.e., soundtracker, noisetacker, MED, etc.). Instead, the four included "tunes" were created with a program called "Face the Music." Apparently, this program has the ability to play 8 channels instead of the standard 4. However, the developers of DesktopMAGIC are currently working on supporting tracker-style modules. Face the Music is currently only available in Germany, but I am told that FTM mods are available on Aminet, if you have access.



The DesktopMAGIC interface



Although DesktopMAGIC supports standard IFF audio samples, the ones included with the program are in HSN format. According to the manual, this format is used for Atari and Windows computers. A small CLI utility to play these samples is provided. However, I was able to play and edit these samples with standard Amiga tools, though the playback speed was not quite right.

### Trigger Happy

DesktopMAGIC also features the ability to trigger an audio sample when a defined event occurs. The program comes with 89 different short samples, including alarms, horns, yelling, animal sounds, etc. The triggering events are divided into five categories: events, keys, program, text, and time.

Events include system alerts, ASL file or font requestor, system message window, screen opening/closing, window opening/closing, disk insert/remove, system beep, left/right mouse click, starting DesktopMAGIC, and user time-out.

Each of these can be independently turned off or on. This is good since having sound played every time you click the mouse can get real annoying! Most of the events described above are self-explanatory. The user time-out will play a sample after a specified time of keyboard or mouse inactivity. You can also set how often it should be repeated.

With each defined audio sample, you have the option of either playing it from RAM or disk. RAM samples will load into RAM when DesktopMAGIC is started, so you'll want to utilize this setting only for frequently occurring events. If a subdirectory in the DM\_Sounds directory is selected, samples within that directory will be played at random when the event is triggered. Only one directory comes set up this way and contains touch tone telephone samples which are triggered by pressing any key on the numeric keypad.

Audio samples can be assigned to any keys on the keyboard, including qualifier keys like Alt, Ctrl, shift, and left/right Amiga. Samples can also be assigned to special groups of keys like F1-F10 and numeric keys 0-9. The default settings make your keyboard sound like you are typing on a typewriter, with some added effects just for fun.

If you assign the proper touch-tone telephone samples to each key on your numeric keypad, you can hold a telephone receiver to your speakers and dial a phone number from your Amiga keyboard! I was skeptical when I was first told of this, but I've tried it and it works. These samples are in a subdirectory of the DM\_Sounds directory by default. You'll have to manually copy them up to the DM\_Sounds directory to be able to assign them individually. (Too bad the numbering order on computer keypads and telephones are different.)

You can also trigger audio when a specified program is run. The Selection of the desired programs is easy using a file requestor.

Audio can even be trigger based on non-case-sensitive text appearing on the screen. This can be input from the keyboard or generated from a program. How about an applause sample every time Amiga appears and maybe "boos" for PC or Mac? I'll warn you that you need to choose the text carefully. Any appearance of the text string triggers the sample, including in menus, requestors, titlebars, etc. It can get annoying if the string is too common.

You could use this text feature to play a certain sample when your 3D rendering program finishes a picture. This assumes that the program displays a string of identifiable text when the rendering is complete.

The Time category turns your Amiga into a cuckoo clock on steroids. You can trigger audio every hour AM or PM, every hour, midnight, every quarter, half, and three-quarter hour, or a specific time. You can optionally have it play the sample the same number of times as the hour, in classic cuckoo clock fashion.

### No Conflict

Because there are so many programmable events, it is likely that a second event could be triggered before a sample triggered from a prior event is finished playing. DesktopMAGIC allows you to set the priority for each audio event. The second sample can wait for the first sample to finish, the second sample can be ignored, or it can override the first sample.

Under AmigaDOS 2.0+, DesktopMAGIC is a commodity and can be deactivated using the Commodities Exchange program. The hotkey that brings up the main window is configurable as is the hotkey that immediately invokes the screensaver effect. Although the manual indicates otherwise, the left and right Amiga keys are LCOMMAND and RCOMMAND, respectively. There is also a weird bug that occurs if you type an unacceptable Effect hotkey, the DesktopMAGIC hotkey will eventually change to SHIFT F2.

You can also set the effect to trigger when the mouse pointer is in one of the four corners of the screen. On my over-sized Workbench screen with my Retina, this only worked for the top-left corner. However, all four corners seemed to work with standard Amiga resolutions seemed. Additionally, both the effect and audio triggers can be independently toggled on or off.

According to a spokesperson at Mediadesk, Delrina has contacted them to possibly port some of their licensed screensaver effects over to the Amiga. This would be an exciting event if it happens. Mediadesk is also working on offering the ability to create your own effect modules.

The only significant problem I had was if I quit the program and tried to run it again. I could not run another program if it opened a new screen. This only happened with my Retina, standard Amiga displays did not exhibit this problem.

### Summary

This program excels in ease of use and features. The manual is exemplary. You could possibly try to do what DesktopMAGIC does using several PD programs, but you wouldn't get the smooth integration of operations nor the configurability of DesktopMAGIC. There is really nothing in DesktopMAGIC that hasn't been conceptually done before on the Amiga; however, the DesktopMAGIC package is so complete and well-thought out, it is easily worth it's price.

•AC•

**Mediadesk**  
1875 S. Bascom Ave., Bldg 116, Suite 204  
Campbell, CA 95008-2359  
(510) 548-7117  
(800) 30-MDESK  
Inquiry #204

*Please Write to:*  
**Douglas J. Nakakihara**  
c/o Amazing Computing  
P.O. Box 2140  
Fall River, MA 02722-2140



## MaxonMAGIC 2.0

*reviewed by Henning Vahlenkamp*

Over the past few years, screen savers have become very popular in the PC and Macintosh communities. They evolved from simple utilities that merely blank the screen (avoiding phosphor burn-in from long periods of unchanging displays) to audiovisual spectacles. Now MaxonMAGIC brings these types of high-powered screen savers to the Amiga. As a bonus, this package includes a system sound manager far more comprehensive than the spartan Sound preferences editor.

Shipping on one disk, MaxonMAGIC is easily installed on either floppy or hard drive systems with convenient Installer scripts. You can choose which parts to install, so even users without hard drives can fit it on their Workbench boot disks. Typically consuming about 200K of RAM, MaxonMAGIC is compatible with all 1MB Amigas, including those with graphics boards that offer Workbench emulation. But a few features require at least AmigaDOS 2.0 or the native Amiga chipset.

### Screen Savers

When you first run MaxonMAGIC, the main interface window for the screen savers appears. This window basically consists of Effects and Options sections. Effects lets you select which of the installed screen saver modules to use. The 20 available modules span the spectrum from an aquarium stocked with fish to a complete dissolving of the screen display. Options contains Global, Hotkey, and Effect groups that alter the way the screen savers work.

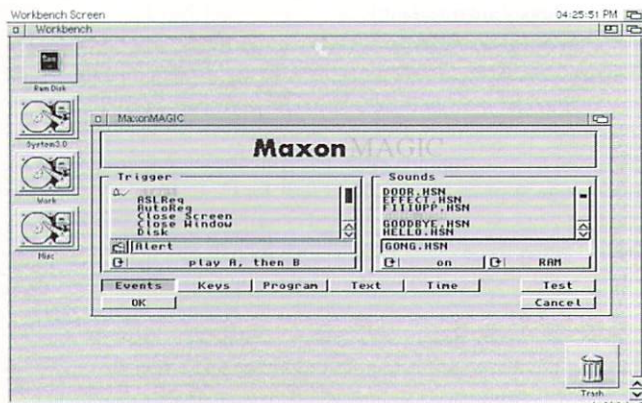
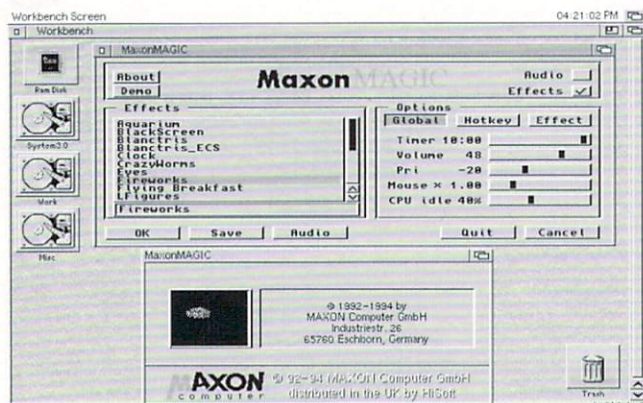
Global settings include the time interval from the last user input to screen saver activation, the sound volume level, and mouse acceleration. Power users will like the ability to change a screen

saver's priority and how much free CPU time must be available before activation. These last two settings prevent complicated screen savers (such as Aquarium) from slowing down computation-intensive background tasks (such as raytracers). From the Hotkey section, you can define keys to open the window and start a screen saver on demand.

The Effect group contains different settings gadgets depending upon which screen saver is chosen. Some screen savers also have configuration options accessible through the Demo button. But most allow you to use sound samples and music. While sound samples can be synchronized to screen saver events such as fireworks explosions, music plays continuously. Only one works at a time, as music preempts sound samples.

You can save the settings of each screen saver as well as those of MaxonMAGIC itself. After you configure the program, it will subsequently run without opening its window. However, the window can be opened via hotkey, an entry in the tools menu, or Exchange, since the program is a commodity.

As for the screen savers, you do get a healthy selection. They are generally attractive, but they offer no AGA-specific enhancements. One thing I don't like is that the Aquarium, Plasma, and



Choosing effects (above left) and sounds (above right) is easy with MaxonMagic's user interface.

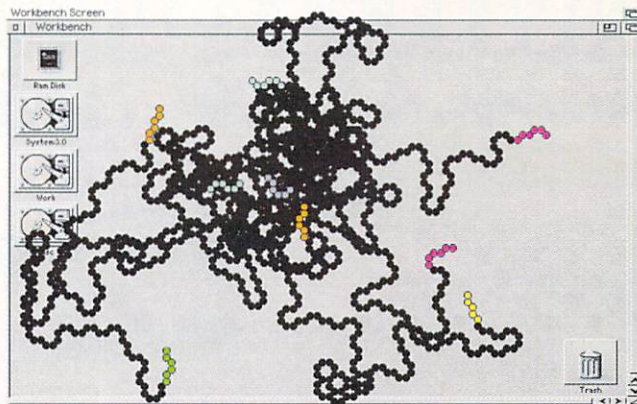


Rain modules insist on using a 15KHz screen, despite the fact that mode promotion is on and all the others get along with my 31KHz display. There's no good reason for requiring this.

### Sound Manager

MaxonMAGIC's other major feature, the system sound manager, is activated by pressing the Audio button on the main window. This manager is really quite amazing. It allows you to assign sampled sounds to many different activities (triggers) including system events (opening/closing windows and screens, diskchanges, etc.), keypresses, launched programs, text output, and even specific times. Imagine hearing a siren when an alert occurs or a chime every hour on the hour. The possibilities for creativity here are limitless. By contrast, the Sound preferences editor is limited to assigning a sound to the displaybeep function.

The sound manager interface is as intuitive as the screen saver interface. All you have to do is select a trigger group, a trigger within that group, and a sound to associate with it. If multiple triggers occur, MaxonMAGIC is sophisticated enough to process them according to your specifications. So the first sound can be played followed by the second, the second can cancel the first, or the second can be ignored altogether.



One of the many MaxonMagic Screen Saver choices.

In future versions, MaxonMAGIC really should have AGA support for 256 colors. Also, it would be nice to have more screen saver modules - perhaps some fractals, kaleidoscopes, slide shows, and ANIM players - and a larger selection of sounds. You get 57 samples in the proprietary HSN format, although you can use any standard IFF 8SVX samples as well. Only one music file is included

---

The sound manager interface is as intuitive as the screen saver interface. All you have to do is select a trigger group, a trigger within that group, and a sound to associate with it.

---

### Conclusions

MaxonMAGIC's documentation often refers to program interface items by different names than the software does. I suspect the manual was written for an earlier version. Nevertheless, it still does a primarily good job explaining everything. Aside from documentation problems, the only software problems I experienced were two unexplained \$80000004 alerts (illegal instructions) caused by the Aquarium module and by pressing Quit. I wasn't able to replicate either one.

with the package though, and MaxonMAGIC requires music in the esoteric FTM (Face The Music) format instead of the universal MOD format.

Overall, MaxonMAGIC is an interesting product. It is one of the first commercial screen savers for the Amiga, and it is better than any noncommercial ones I've seen. Another strong selling point is the truly unique system sound manager. Although MaxonMAGIC is good now, it would be even better if it implemented some of the suggestions of the previous paragraph.



A sample of a full-screen image (color image shown in black and white).

•AC•

MAXON Computer GmbH  
Industriestr. 26  
65760 Eschborn, Germany

Distributed in the USA by  
Oregon Research  
16200 S.W. Pacific Hwy.  
Suite 162  
Tigard, OR 97224  
(503) 620-4919  
(503) 624-2940 fax  
Inquiry #205

Please Write to:  
Henning Vahlenkamp  
c/o Amazing Computing  
P.O. Box 2140  
Fall River, MA 02722-2140



# AMIGA WAREHOUSE

Committed to Amiga... No Matter What!

ORDER LINE • USA & Canada  
**1-800-258-0533**

INTERNATIONAL  
ORDER LINE  
**412-962-0567**  
CUSTOMER SERVICE (412) 962-0533  
CUSTOMER SERVICE HOURS  
10 a.m. - 5 p.m. Monday thru Friday

## DKB 1202



Realize the full potential of A 1200 with the DKB 1202 expansion board.

Speeds up math intensive operations, a must have feature if you do any morphing or animation. Image manipulation or ray-tracing. Offers the option of running a math co-processor up to 40MHz. Easy installation!

**\$99**



## HIGH DENSITY DISK DRIVE



**XL DRIVE - HIGH DENSITY**  
High Density External Drive for any Amiga formats 1.76MB with standard DD Disks compatible for PC Disks requires Work Bench 2.1 or above

**\$134**

Internal for A2000/A4000 ..... \$145

## DISK EXPANDER

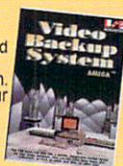
With this software solution you may double the capacity of your disk or hard disk drives. Easy installation and works invisible in the background. The compression ratios vary from 30% to 70%. The easy to use graphical interface guarantees that even the inexperienced user is able to use Disk Expander immediately without any problems. Disk Expander does not only expand the capacity of your disk drive, even floppy disks now have a storage space of approximately 1.5 megabytes. (Works with all drives including, SCSI, IDE, Floppies and even the RAD disk).

**\$37**

## VIDEO BACKUP

Use a VCR as a backup storage device. Two hundred Amiga floppy disks fit on to a 4Hr. tape which can be used for an alternative hard disk backup system. What's more you can now watch television on your 10845 monitor. Scart or Phono version is available.

**\$86**



## clarissa V2.0 AGA

**\$149**

The animation utility of the year! Assemble single images into animations and converts ANIM-5 and ANIM-7 to SSA format for playback up to 60 fields per second while greatly reducing the size. Clarissa also features flexible editing capabilities like cut, copy and paste on single frames or ranges and color functions such as fading, chaos and lightning. Animations with different resolutions can be combined into a single animation. Full AREXX support and a built-in screen grabber make Clarissa integrate seamlessly with other applications. A redistributable SSA playback program is included. Clarissa received the "Product of the Year" award from Amiga Magazin Germany and the "Amiga Plus Award 93- Best Animation Software"

## Adorage V2.0 AGA

**\$149**

Create dazzling 2D and 3D transitions between scenes and images in near real-time. Whether intended for presentations, info-systems or video footage, there is no effect-generation tool that surpasses Adorage in versatility, ease-of-use or results. User-definable parameters and a wealth of built-in effects deliver output limited only by your imagination. The support of up to 256-color AGA displays provides Adorage with superior quality results, while the SSA animation format guarantees the fastest playback possible at up to 60 fields per second.



## AMIGAlink

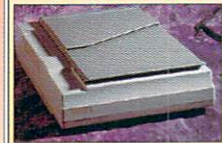
**\$249**

Networking up to 20 Amigas together over a distance of up to 330 feet has now become easy and affordable. AmigaLink installs on the external floppy drive port, eliminating the need for internal installation or use of a Zorro slot. Set up and configured in minutes, AmigaLink offers sharing of all storage devices and printers across the network. Lighwave users now have an easy way to distribute rendering jobs to multiple machines.



**SPECTRONICS**

## MIGRAPH 24-Bit Color FLATBED SCANNERS



The MS1200 & MS2400 let you scan 16.7 million colors, 256 true greys, & line art. Perfect for the Toaster & other video, multimedia, & DTP applications.

FREE OCR JR.

- 2 Models: MS1200 - 3 pass scanning; 1200 dpi max. MS2400 - 1 pass scanning; 2400 dpi max.
- 6.5" x 14" scanning area
- ColorKit Pro - saves 24-bit TIFF and more.
- Scan size limited only by available hard disk space.
- SCSI cable and terminator
- Optional transparency adapter & sheet feeder

**\$1099 \$899**

## ColorBurst™ COLOR HAND SCANNER

Three scanners in one! Scan color, true grayscale and monochrome line art. Perfect for video, multimedia, desktop publishing and more.

- 4 Scan Modes: 262,144 colors; 4096 colors; 64 true grayscales; monochrome text
- 50-400 dpi (based on scan mode selected)
- ColorKit software - quick, accurate scanning: save IFF, HAM-8, and 24-bit IFF
- Parallel interface with cable
- 100% compatible
- OCR Jr. text recognition - included



**\$399**

## MONOCHROME HAND SCANNER NOW with Touch-Up v3. (AGA compatible)

\* OCR Jr. text reader **\$199**



## MegaLoSound

Megalosound is an amazingly low cost, full featured, 8 Bit Stereo sound processor. But that's not all! It also features Direct-to-Disk Recording of samples. Up to 56KHz sample rate.

**\$39**

**VideoMaster AGA** video digitiz & sound sampling all in one package. Full Color Stills, greyscale motion video clips, and Video sequence Editor. Includes stand alone sequence player and ANIM5 converter. For A500, A600, and enhanced AGA version for A1200! Also available is ColorMaster. Capture full screen still pictures AUTOMATICALLY, from any video source. FAST!

**\$89**

**HiSoft Basic 2** A Major Upgrade to HiSoft Basic Professional including fully integrated editor/compiler/source debugging environment. 2 time faster than previous versions and has full support for WB1.3, 2, and 3! Excellent manual, lot's of programming examples.

**\$95**

**Devpac 3** Fast, Assembly language programming environment for all Amigas. Integrated, multi-window Editor, Debugger, and FAST Assembling.

**\$79**

**Also Available...** CLARITY 16- 16 bit stereo sampling and replay with MIDI. SEQUENCER ONE/ONE PLUS. Entry level & Mid-level MIDI and sample sequencer systems with highly acclaimed Diamond Drag note editing system. MaxonMAGIC - Amazing Screen Saver & system audio manager. Colorful modules. Assign sounds to system events. PRO-MIDI - Low cost MIDI interface!



## RETINA

24Bit Frame Buffer and Workbench Emulation. Analog RGB output, 800x600 Full 24Bit 16.7 million color display. Non-interlaced Full Workbench Emulation with resolution such as 1024x768 or 1280x1024 in 15 colors or better. Up to 2400x1200! Paint program comes with Retina. The Retina can still be used to display 24Bit graphics while emulating Workbench. Requires the 2.0 or greater operating system.

## Retina ZII & ZIII Call

## Lab New V-Lab Motion

Non-Linear Video & Audio Editing and Playback! **\$1525**  
Internal for the A2000, 3000, AND A4000.  
Y/C Version \$459  
New External for 500, 600, 1200

**TOCCATA** The Toccata is a full 16Bit audio digitizer with 3 Stereo inputs, digitize at up to 48 KHz in 16Bit and 8Bit direct to harddisk. Playback from Harddisk up to 16 channels in 16Bit. 64 Times Overstepping, 16 sampling rates. Freq. Response 10 Hz to 20 KHz. Simultaneous Record & Playback from HardDrive. **\$379**

## CD 32 AND AMIGA ENTERTAINMENT SOFTWARE

<b>CD32 SOFTWARE TITLES</b> ALFRED CHICKEN CD32 ARABIAN NIGHTS CD32 BANSHEE CD32 BATTLECHES ENHANCED CD32 BATTLELEADS CD32 BEAVERS CD32 BRIAN THE LION CD32 BRUTAL SPORTS FOOTBALL CD32 CASTLES II CD32 CHAMBER OF SHAOLIN CD32 CHAOS ENGINE CD32 D-GENERATION CD32 DANGEROUS STREETS CD32 DEEP CORE CD32 DEFENDER OF THE CROWN II CD32 DIGGERS CD32 DISPOSABLE HERO CD32 DOWN THE SAMURAI DUCK CD32 FIRE & ICE CD32 FIRE FORCE CD32 FLASH BACK CD32 FOOTBALL CD32 FRONTIER-ELITE 2 CD32 FURY OF THE FURRIES CD32 GLOBAL EFFECT CD32 GROULERS CD32 GUNSHIP 2000 CD32 HEIMDALL 2 CD32 HUMANS CD32 IMPROSSIBLE MISSION CD32 INSIGHT CD32 INTERNATIONAL KARATE CHAMP CD32 JAMES POND 3: STARFISH CD32 JOHN BARNES SOCCER JURASSIC PARK CD32 LABYRINTH OF TIME CD32 LEGACY OF SORASIL CD32 LEMMINGS CD32 LIBERATION CD32 LOST VIKINGS CD32 LOTUS TRILOGY CD32 MEAN ARENAS CD32 MICROGEM CD32 MICROGEM/CHAOS ENGINE/DIGGERS MORPH CD32 NAUGHTY ONES CD32	NICK FALDO GOLF CD32 NIGEL MANSELL CD32 OSCAR CD32 OVERKILL/LUNAR C CD32 PANTHERS GOLD CD32 PREMIERE CD32 REACH OUT FOR GOLD CD32 ROBOCO/JAMES POND 2 CD32 RYDER CUP GOLF CD32 SEEK AND DESTROY CD32 SENSIBLE SOCCER CD32 SIM CITY CD32 STRIKER CD32 SUMMER OLYMPIX CD32 SUPER METHANE BROTHERS CD32 SURF NINJAS CD32 TTX CD32 TOTAL DAMAGE CD32 TROLLS CD32 ULTIMATE BOY BLOWS CD32 VIDEO CREATOR CD32 WHALES VOYAGE CD32 WING COMMANDER CD32 WINTER SPORTS CD32 ZOOZ 2 CD32 ZOOZ CD32 7 GATES OF JAMBALA CD32 <b>CD-I FULL MOTION MOVIES</b> FMV CARD REQUIRED ADDAMS FAMILY CD-I MOVIE ANDREW LLOYD WEBBER CD-I APOCALYPSE NOW CD-I MOVIE BEST OF BABY SONGS CD-I BILLY RAY CYRUS CD-I MOVIE BLACK RAIN CD-I MOVIE BON JOVIE/KEEP THE FAITH CD-I BRYAN ADAMS CD-I CONE HEADS CD-I MOVIE ERIC CLAPTON CD-I FATAL ATTRACTION CD-I MOVIE FROM RUSSIA WITH LOVE CD-I MOVIE GOLDFINGER CD-I MOVIE HUNT FOR RED CT CD-I MOVIE INDOCENT PROPOSAL CD-I MOVIE NAKED GUN 2 1/2 CD-I MOVIE PATRIOT GAMES CD-I MOVIE PLANES, TRAINS, AND AUTO CD-I	PLAYBOY MESSAGE CD-I POSSE CD-I MOVIE SHARI LEWIS/LAMB CHOP CD-I SILVER CD-I MOVIE STAR TREK VI CD-I MOVIE STRING CD-I THE FIRM CD-I MOVIE TOP GUN CD-I MOVIE TROPICAN CD-I MOVIE 100 GREATEST TOUCHDOWNS CD-I <b>CDTV/CD32 TITLES</b> WORKS FINE ON CD32, MAY REQUIRE A MOUSE OR KEYBOARD THOMAS SNOWSUIT NIGHT BEFORE CHRISTMAS BENJAMIN BUNNY PAPER BAG PRINCESS MOVING GIVES ME STOMACH ACHIE HEATHER HITS HER 1ST HOMERUN TOWN WITH NO NAME FUN SCHOOL 3 UNDER 5 ALL DOGS GO TO HEAVEN DINOSAURS FOR HIRE MUD PUDDLE HOUND OF THE BASKERVILLES LONG HARD DAY ON THE BRANCH BATTLE STORM CLASSIC BOARD GAMES CASE OF THE CAUTIOUS CONDOIR GROULERS' ENCYCLOPEDIA V.I. <b>HARDWARE</b> CD32 COMPETITION PRO SUPER PAD S11C32 EXPANSION INTERFACE S11 KEYBOARD <b>AGA SOFTWARE ON SPECIAL</b> ALFRED CHICKEN AGA BOY BLOWS GALACTIC AGA (BAGGIE) D-GENERATION AGA DENNIS THE MENACE AGA FATMAN AGA INT'L OPEN GOLF AGA LIBERATION/CAPTIVE 2 AGA NAUGHTY ONES AGA NIGEL MANSELL AGA (BAGGIE) TROLLS AGA (BAGGIE) ZOOZ AGA (BAGGIE) <b>AGA SOFTWARE LISTING</b> ALIEN BREED 2 AGA	BANSHEE AGA BRUTAL SPORTS FOOTBALL AGA CHAOS ENGINE AGA CIVILIZATION AGA GUNSHIP 2000 AGA HEIMDALL 2 AGA IMPOSSIBLE MISSION AGA JAMES POND 2: ROBOCO AGA JAMES POND 3: STARFISH AGA JURASSIC PARK AGA OUT TO LUNCH AGA OVERKILL AGA RYDER CUP GOLF AGA SABRE TEAM AGA SECOND SAMURAI AGA SIM LIFE AGA SIMON SCORCERER AGA STAR TREK: TEST AGA TORNADO AGA ZOOZ 2 AGA <b>AMIGA SOFTWARE SPECIALS</b> ALFRED CHICKEN ALIEN BREED SPECIAL ALEKS BOY BLOWS BOY BLOWS GALACTIC BURNING RUBBER CHAOS ENGINE CHESS CHAMPION 2175 CHUCK ROCK 2 CRIME CITY CYBERCON III CYBERPUNK CYTRON DARKMERE DEEP CORE DISPOSABLE HERO DOGFIGHT DONK THE SAMURAI F117A STEALTH FATMAN	FUTURE WARS GRAND PRIZ CIRCUIT HAGAR THE HORRIBLE HEART OF CHINA HOOK HUMANS INDIANAPOLIS 500 JET STRIKE JOHN BARNES SOCCER KNIGHTS OF THE CRYSTALLION LOTUS TRILOGY MEAN ARENAS MORPH MR. NUTZ NICK FALDO GOLF NICKY 2 NIGHT SHIFT ONE STEP BEYOND PINBALL FANTASIES PRIME MOVER PUSH OVER RBI BASEBALL 2 REALMS ROAD RASH SEEK AND DESTROY SHADOW OF THE BEAST 3 SLEEPWALKER SWINTER VERSION 1.0 SYNDICATE THEATRE OF DEATH TRANSACTICA TROLLS W.K.F. EURO RAMPAGE WINTER CAMP WINTER SPORTS WOLFCHILD WONDERBOG WORLDS OF LEGEND <b>AMIGA SOFTWARE</b> A320 AIRBUS ANCIENT ART OF WAR IN THE SKIES APOLYDIA ASSASSIN SPECIAL EDITION ATRAIN CONSTRUCTION BUNDLE AWARD WINNERS 2 BATTLE ISLE 83 BATTLE TOADS	BENEATH A STEEL SKY BIRDS OF PREY BRIAN THE LION BRUTAL SPORTS FOOTBALL BUBBA N-STIK CAMPAN 2 CANNON FODDER CIVILIZATION COHORT 2 COMBAT AIR PATROL COOL SPOT CRASH DUMMIES DARK SEED DESERT STRIKE DUNE 2 ELFANIA EXCELLENT GAMES FI RACING FI CHALLENGE FANTASTIC WORLDS FIGHTER DUEL PRO II FLASH BACK FLY HARDER ROAD RASH FURY OF THE FURRIES GEARWORKS GENESIA GUNSHIP HARRIS ASSAULT HEIMDALL 2 HISTORY LINE 1914-1918 HOI IMPOSSIBLE MISSION INDIANA JONES/SATANISTS INNOCENT UNTIL CAUGHT INTELLIGENT STRATEGY GAMES JACK NICKLAUS GOLF JOHN MADDEN FOOTBALL JURASSIC PARK K240 KINGMAKER KINGS TABLE LEGACY OF SORASIL LEMMINGS 2 LORDS OF TIME	LOST VIKINGS MICRO MACHINES MORTAL KOMBAT NAUGHTY ONES PATRICIAN PERILLION PINBALL DREAMS/FANTASY COMBO PUGGYS REACH FOR THE SKIES RISKY WOODS ROBINSON'S REQUIEM SECOND SAMURAI SENSIBLE SOCCER SETTLERS SIM CITY CLASSIC SIM EARTH BUDGET SIM LIFE SIMON THE SWORDCORN SKID MARKS SOCCER KID SPACE HULK SPORTS TOP TEN STAR LORD STARCRAFT STREET FIGHTER 2 STRIKES AND SPARES STRIP POKER 3 STRIP POKER DATA 1 STRIP POKER DATA 2 STRIP POKER DATA 3 STRIP POKER DATA 4 STRIP POKER DATA 5 SUPER METHANE BROTHERS TEAM 17 TERMINATOR 2 THE BLUE & THE GREY TOM LANDRY FOOTBALL DELUXE TORNADO TRIPLE ACTION 3-TITUS FOX TRIPLE ACTION 4-ELLES BROS. UP OFFENSE VAL HALLA WALKER WAR IN THE GULF WHEN TWO WORLDS WAR WINTER OLYMPICS
---	---	---	---	--	---	---



## MACROSYSTEM

### WARP ENGINE

The Only Expansion Device you need for your Amiga 4000 (or Amiga 3000) that provides High-Speed 040 Acceleration, up to 128 MegaBytes of Local 040 Burst Memory and the fastest SCSI-II Controller Available!

Why? Because all of this expansion is on a single board that installs into the CPU slot! Not a Zorro III slot!

FEATURES	WarpEngine	GVP 040/40	FastLane
25MHz, 33MHz, 40MHz versions	YES	NO	NO
25MHz Upgradeable to 33 and 40MHz	YES	NO	NO
Expandable Onboard to 128MegaBytes Ram	YES	NO	YES
Built in SCSI-2 Hard Drive Controller	YES	NO	YES
Uses Industry Standard SIMM Modules	YES	NO	NO
Uses any Combination of SIMMS	YES	NO	NO
Allows use of the Memory from the Amiga	YES	NO	NO

**28 MHz.... 2 times as fast as standard 4000/40 ..... \$799**

**33 MHz.... 2.5 times as fast as standard 4000/40 .. \$1199**

**40 MHz.... 3 times as fast as standard 4000/40 .... \$1429**

## EXPANSION SYSTEMS

Making Technology Affordable Since 1986

Now add up to 5 SCSI devices like CD ROMs, removable media drives, tape backup systems and scanners without using the "CPU slot" or an "expansion slot". The DataFlyer SCSI+ card attaches to the IDE header and converts it to also run SCSI. Operate your original IDE/AT drive at the same time. Easy PLUG-IN installation. Includes external DB25 connector, hardware.

### DATAFLYER SCSI+

Available for A1200 or 4000

**\$92**

---

### DATAFLYER A1200 External IDE Case

Install Your Favorite 3.5" Hard Drive

**\$79**

Includes all cables and connections.

Now... Desktop Magic Animated

**SCREEN SAVER**

Over 25 Selections and sounds to windows, keys, time...

**\$29**

### Checks & Balances

The Latest Generation in Personal & Small Business Record Keeping and Finance Management.

**\$39**

## TV Paint...

True State of the Art in Amiga 24 bit paint packages. The many features of TV Paint include Image Manipulation, Drawing Tools, Editing Tools, Emboss, Sharpen, Relief, Outline and much, much more!

**\$219**

---

### MULTIFRAME-ADPro \$64

Requires Art Department Professional or MorphPlus & AReX: AmigaDOS 2.04 or higher.

Multi-Frame for ADPro is a compositing/layering interface for video professionals & artists using ASD's ADPro program as a compositing engine. Improves ADPro's impressive array of compositing functions. Control up to 100 Layers.

## PageStream3.0

The Ultimate desktop publishing program! PageStream3 provides professional typesetting and graphic tools. The feature-packed toolbox creates any type of shape, which you can color with PANTONE® colors and gradient fills. Import and export text and graphics in many formats, and see pictures in full color. AGA compatible! Automatic Flash macros automate most layout tasks and create custom page designs. Create your own macros with recordable AReX! Load ProPage documents and edit ProDraw drawings. Unlimited Undo and Redo, extensive online help, autosave, dot leaders, index generation and more! Includes BME 2 image processor, PageLineR 2 text processor, 50 fonts and 100 graphics!

**\$224**

## M1230XA

High speed 68030 Accelerator

W/32 Bit RAM Board up to 128 MB RAM, Includes Realtime Clock

**\$299**

50 MHz 68030 w/MMU/FPU 50/50/0

**MBX 1200z** NO FPU .....\$79

**14 MHz 68881** .....\$99

## typeSMITH v2.0

Create bitmap and outline fonts for all your programs! Convert between PostScript, Compugraphic and Soft-Lite fonts. Autotrace bitmaps and generate bitmaps from outline fonts. Automate font creation with AReX. Copy and paste characters between fonts, and add professional hinting to your fonts. Compute, Amazing, Amiga Format and AmigaNews all called TypeSmith a must-have program. Voted best DTP utility by Amazing's readers.

**\$124**

## EDGE

Professional Products From...

**\$59**

Edge is an easy-to-use, professional-quality text editor ideally suited for notes, scripting and any other forms of text manipulation.

Features include: unlimited number of files, unlimited number of windows/files, infinitely configurable user interface, fast search & replace, full AReX support with macro recording, AReX controllability, multi-level undo, extensive "on-line" help, comprehensive paragraph formatting and MUCH more!

The Leading Edge in Amiga Text Editors.

## OPUS

Realize your full productivity with Directory OPUS! OPUS allows you to easily manipulate data files; display images; play sounds; ANIMS, BANIMS, and MODS; and launch programs from its powerful, yet easy to use interface. A "must-have" for hard drive owners. Use OPUS once, and you'll never want to be without it! (It's the best-selling software utility on the Amiga!)

**\$69**

## CanDo!

The CanDo software advantage package allows you to take advantage of the Amiga's powerful architecture, regardless of your technical abilities. You can program anything from a simple presentation to the most advanced professional application program in record time. In short, CanDo takes the guesswork and drudgery out of programming and lets the creative genius in you run wild.

**\$119**

## GIGAMEM

GigaMem virtual memory system lets your Amiga utilize unused hard drive space as RAM, eliminating the need for additional hardware! With GigaMem you can run memory-hungry programs (such as Art Department, LightWave, CanDo and PageStream) without running low on memory.

**\$89**

## INOVATRONICS

The leaders in AMIGA Productivity Software

## AMIGA MONITORS

**17" IDEK Multi-Scan**

15-40MHz 1024 X 768 Res. IDEAL FOR VIDEO

**\$999**

**14" Electrohome**

1440, 15-40MHz 1024 X 768 res. IDEAL FOR ALL AMIGAS

**\$499**

---

## Primera Color PRINTER

MORE COLORFUL

- High-resolution thermal transfer color printing
- Primera's color is brighter, richer, sharper and more vibrant than other color printing technologies.

**\$795**

WITH PHOTO REALISTIC (Dye Sublimation) ..... \$949

YOUR COMPLETE SOURCE FOR ALL AMIGA PRODUCTS!									
<b>A.I.R.</b>		<b>ONE STOP MUSIC</b>		<b>DIGITAL PROCESSING SYSTEMS</b>		<b>WARF ENGINE 33MHz</b>		<b>SEQUENCER ONE</b>	
FD EXTERNAL AIR DRIVE	89	BRUCE SMITH BOOKS	559	PERSONAL V-Scope	769	WARF ENGINE 40MHz	1429	SEQUENCER ONE PLUS	25
EXCELSIOR 1.0 BBS	115	A1200 THE NEXT STEP	29	PERSONAL V-Scope	769	SPARKS	279	TYPE SMITH 2.0	124
<b>ADDITION WESLEY BOOKS</b>		MASTERING AMIGA DOS 2 VOL 1	29	RC 2000 TBC III REMOTE UNIT	139	MULTI-FRAME-ADPRO	309	SOFTCLIPS CLASSIC CLIP ART	16
ROM KERNELS/INCLUDES AND AUTOODS	29	MASTERING AMIGA DOS 2 TUTORIAL	3	ES-2200 BACKMOUNT CONTROL UNIT	520	MULTI-FRAME-ADPRO	31	SOFTCLIPS PEOPLE CLIP ART	50
ROM KERNELS/LIBRARIES	29	MASTERING AMIGA BEGINNERS	29	PERSONAL TBC III	739	MERRITT COMPUTER SYS.	79	FINAL WRITER	112
ROM KERNELS/HARDWARE	23	MASTERING AMIGA C	23	PERSONAL TBC IV	849	SAFESKIN A2000	19	SOFTCLIPS COLLECTORS CLIP ART	50
ROM KERNELS/DEVICES	23	MASTERING AMIGA D	23	PERSONAL TBC V	849	SAFESKIN A500	19	FINAL COPY II	69
ROM KERNELS/USER INTERFACE STYLE	23	MASTERING AMIGA E	23	PERSONAL COMPONENT ADAPTER	1699	SAFESKIN A1000	19	SOFTCLIPS ALLIGATOR CLIP ART	62
ROM KERNELSET	119	MASTERING AMIGA F	23	PERSONAL ANIMATION RECORDER	1699	SAFESKIN A1200	19	SOFTCLIPS VOL 2	62
<b>ADSPEC</b>		MASTERING AMIGA G	23	PERSONAL ANIMATION RECORDER	1699	SAFESKIN A3000/4000	19	SOFTCLIPS VOL 3	62
ALADINO 40 3.0 (B&W & P&A)	249	MASTERING AMIGA H	23	PERSONAL ANIMATION RECORDER	1699	MICRO R & D	79	SOFTCLIPS VOL 4	62
<b>ADVANCED STORAGE</b>		MASTERING AMIGA I	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	SOFTCLIPS VOL 1	62
FASTLANE SCSI II & RAM CARD	249	MASTERING AMIGA J	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	PROPER GRAMMAR II	135
<b>APEX</b>		MASTERING AMIGA K	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	TOASTER HANDLER	65
ESSENCE	49	MASTERING AMIGA L	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	SMITTE OUTRIG	149
<b>ASDG</b>		MASTERING AMIGA M	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	AD1012 & STUDIO 16	139
CYGNUS ED PRO	52	MASTERING AMIGA N	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	SOUND SWITCH	129
PRO CONVERSION PACK	52	MASTERING AMIGA O	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	<b>SUPRA</b>	
TRIPTRIP 24	120	MASTERING AMIGA P	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	MODEM 2400bps SUPRA	74
<b>TREX PROFESSIONAL 2</b>		MASTERING AMIGA Q	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	MODEM 2400bps SUPRA V.42	74
ADPT PRO 2.5	189	MASTERING AMIGA R	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	MODEM SUPRA V.32bis (14400)	225
DUAL SERIAL BOARD	23	MASTERING AMIGA S	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	MODEM SUPRA V.32 (9600)	225
<b>MORPH PLUS</b>		MASTERING AMIGA T	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	MODEM SUPRA V.32 (9600)	225
<b>ASIMWARE INNOVATIONS</b>		MASTERING AMIGA U	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	<b>TRIMEDIA</b>	
ASIMCDFS 2.0	59	MASTERING AMIGA V	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING SLATE 639	299
<b>AVEC</b>		MASTERING AMIGA W	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
AVEC TOWER - AMIGA VHS CHAS	299	MASTERING AMIGA X	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
EXT CASE - 1 BAY CDS FRT-SCSI	299	MASTERING AMIGA Y	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
EXT CASE - 1 BAY ONT-SCSI	299	MASTERING AMIGA Z	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
EXT CASE - 1 BAY UPRIGHT-SCSI	299	MASTERING AMIGA A	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
EXT CASE - 2 HALF HIGH BAYS-SCSI	299	MASTERING AMIGA B	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
EXT CASE - 4 BAY - OPEN FRT-SCSI	299	MASTERING AMIGA C	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
<b>AXIOM</b>		MASTERING AMIGA D	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
<b>WAVE LINK</b>		MASTERING AMIGA E	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
PIXEL 3D PRO 2.0	149	MASTERING AMIGA F	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
ANIM WORKSHOP 2.0	129	MASTERING AMIGA G	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
<b>WAVEMASTER</b>		MASTERING AMIGA H	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
<b>BLUE RIBBON BAKERY</b>		MASTERING AMIGA I	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
MOD TRIPLE PLAY +	170	MASTERING AMIGA J	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
POWER TOOLS KIT	94	MASTERING AMIGA K	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
PERFORMANCE TOOLS KIT	220	MASTERING AMIGA L	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
BAR'S & PIES PROF 2.5	220	MASTERING AMIGA M	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
PRO STUDIO KIT	220	MASTERING AMIGA N	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
SUPER JAM	220	MASTERING AMIGA O	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
PATCH MASTER	220	MASTERING AMIGA P	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
TOOLS FOR TOOLS	31	MASTERING AMIGA Q	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
CREATIVITY KIT	36	MASTERING AMIGA R	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899
SYNCPRO MID/SMTP INTERFACE	179	MASTERING AMIGA S	23	PERSONAL ANIMATION RECORDER	1699	BIOPRO 4500 POWER SUPPLY 320W	149	DRAWING BOARD III 18X18 CORLESS	899



# I N S I D E

# ARexx

by Merrill Callaway

## Error Traps and Interrupting ARexx Programs

### What are ARexx Interrupts?

We have all heard on TV, "We interrupt this program to bring you a special message..." Computer interrupts are functionally the same. Whenever something occurs that needs immediate attention, such as an error, or a break signal from the user, all operating systems and programming languages provide a means to trap errors or deal with the situation dynamically before the program terminates. ARexx is no exception.

When certain conditions occur within ARexx its internal interrupt system allows you to trap errors or detect events such as pressing the Ctrl-C keys (You press the control key and the C key at the same time). A Ctrl-C break is an asynchronous event. Synchronous events occur when the program detects something like a syntax error during its run time source code scan. Asynchronous events occur simultaneously in parallel and synchronous events occur in series, one after the other. ARexx can handle both types of events. If (and only if) a particular ARexx interrupt event is enabled in the program source code, the internal interrupt system will transfer program control to a label with the same name as the enabled interrupt or condition, once it occurs. For example if you want the program to trap a user induced Ctrl-C break, and branch to its corresponding subroutine label whenever the user presses

Ctrl-C, then at the beginning of the program place an instruction:

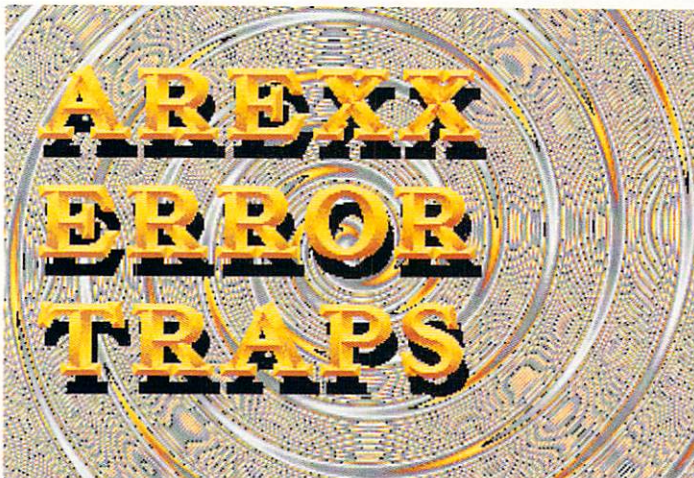
```
SIGNAL ON BREAK_C
```

to enable the interrupt trap. If the user presses Ctrl-C during its execution, the program will immediately branch to a label BREAK\_C: (NOTE: It will generate an error if the label is not found). If the trap is NOT enabled, then AmigaDOS (and not ARexx) terminates the program with the error code set to 2. AmigaDOS-requested BREAK\_D, BREAK\_E, or BREAK\_F user interrupts may also be enabled with SIGNAL ON, but in case they are not enabled, these AmigaDOS requests are simply ignored; AmigaDOS will not terminate the program, nor will it branch. SIGNAL OFF [condition] is used to disable interrupts. Once an interrupt is triggered, this will also disabled it.

Whenever an error trap is enabled, there must be a corresponding subroutine labelled with the same name as the interrupt in order for program control to transfer there in the event of the interrupt. For instance, the program will attempt to branch to a label ERROR: if an error occurs and if the ERROR interrupt is enabled with a SIGNAL ON ERROR instruction in your code. You may put any code you want to execute after the label, such as an orderly exit or a custom error message. Some may notice that ARexx does not follow standard (IBM/SAA) REXX practices in that there are no CALL ON [interrupt] instructions enabling a RETURN from the trap subroutine. If a trap is to return and continue the program where it left off, then an explicit SIGNAL label instruction (used as a GO TO) is necessary, as we will see.

Traps act like circuit breakers in an electrical system. Once the event trips a branch to the trap subroutine, then exactly like a circuit breaker, the interrupt must be re-enabled to trap such an event a second time. If your program anticipates another interrupt, it is a good idea to place a SIGNAL ON instruction at the end of the trap subroutine before branching back to the main program, or else re-enable the traps immediately after the label in the main program to which the trap branches.

The SIGNAL instruction has as its interrupt subkeywords: BREAK\_C, BREAK\_D, BREAK\_E, BREAK\_F, ERROR, FAILURE, HALT, IOERR, NOVALUE, and SYNTAX. The correct syntax for using SIGNAL with, for instance, a control-C break is to use





SIGNAL ON BREAK\_C to turn on (enable) the interrupt, and a SIGNAL OFF BREAK\_C instruction to turn it off (disable) it again. All the rest follow the same syntax:

<b>TRAP</b>	
<b>INTERRUPT</b>	<b>LABEL:</b>
<b>BREAK_C</b>	<b>BREAK_C:</b>
Program detects user presses Ctrl-C.	
<b>BREAK_D</b>	<b>BREAK_D:</b>
Program detects user presses Ctrl-D.	
<b>BREAK_E</b>	<b>BREAK_E:</b>
Program detects user presses Ctrl-E.	
<b>BREAK_F</b>	<b>BREAK_F:</b>
Program detects user presses Ctrl-F.	
<b>ERROR</b>	<b>ERROR:</b>
A host command returns non-zero code.	
<b>FAILURE</b>	
A host command returns FAILURE:	
RC>= FAILAT level (Set by OPTIONS).	
<b>HALT</b>	<b>HALT:</b>
Program detects external HALT request.	
<b>IOERR</b>	<b>IOERR:</b>
Error detected in input/output system.	
<b>NOVALUE</b>	<b>NOVALUE:</b>
Program uses an uninitialized variable.	
<b>SYNTAX</b>	<b>SYNTAX:</b>
Syntax or execution error detected.	

### What happens during an interrupt?

First, ARexx dismantles all active control ranges, which are the ranges in DO loops, IF instructions, SELECT, or INTERPRET blocks; or for interactive TRACES. Then ARexx transfers control to the label specified by the enabled interrupt. Since the active control ranges are dismantled, you cannot use an interrupt to jump into a control structure such as a SELECT block. If you are inside an internal function, and an interrupt occurs, it is safe to use SIGNAL without affecting the environment of the calling program.

### Special Variables

RC, the special Return Code variable, plays a part in interrupts. RC is set to the error code (for SYNTAX interrupts); or severity level (for ERROR interrupts) of the condition that caused the interrupt, and you may therefore check RC immediately after your label statement if you want to know about what caused the transfer. There is another special variable called SIGL which returns the line number that was being executed at the time of the interrupt. Use these two variables to get information about errors in the trap subroutine.

### Command Utilities

ARexx has several command utilities which provide control functions which operate outside the ARexx program. Command utilities are invoked just like any AmigaDOS command from a Shell or CLI. A command utility also may be invoked from within an ARexx program as an AmigaDOS command. Either AmigaDOS or the ARexx resident process will recognize them. The HALT trap above corresponds to an event triggered by the command utility HI (for Halt Interrupt). Four command utilities are relevant to our discussion.

HI sets the global halt flag which sends a halt request to all active ARexx programs. Each active ARexx program will immediately exit unless its HALT interrupt has been enabled. If it has been enabled, the program branches to the label HALT: and continues there. After all currently active programs have received the halt request, the flag is cleared.

RX is used to start ARexx programs from a CLI or Shell.

TS forces all active ARexx program into interactive trace mode. This flag remains set until cleared by the TE command utility which turns off global interactive tracing. We will see the use of these in traps later.

### Using SIGNAL as a GO TO Statement

A second way to use the SIGNAL instruction is

```
SIGNAL labelname
or
SIGNAL VALUE expression
```

which evaluates the expression if supplied and jumps to a label with its value; or simply jumps to the supplied labelname if it is a literal string. This is exactly like a GO TO instruction in other languages. For instance if you have a need for the program to jump to a label called "Instead:" then use a SIGNAL Instead instruction. If the label name is the result of an expression, then the SIGNAL VALUE expression acts just like a computed GO TO, jumping to whatever label the evaluated expression indicates. Use a GO TO only when absolutely necessary, or your code may suffer. Stick to structured programming (using only IF THEN ELSE; DO WHILE; SELECT; and DO UNTIL constructs). You will be better off. It is provable that structured programs can perform any logic you need. The exception is using SIGNAL to jump back to the main program after an interrupt.

### An Example of the Use of Interrupts

Here is a little program that will demonstrate what we have just discussed. It contains an example of the use of every interrupt except the IOERR interrupt. I couldn't get my system to misbehave in order to trap this one! The program also demonstrates the use of SIGNAL properly used as a GO TO statement and as a computed GO TO. Although the program does nothing except demonstrate, you could use it as a pattern to insert error traps in your own code. The listing shows Int.rexx a demonstration of Interrupts in ARexx.

### The Code

The program generates error, failure, novalue, and syntax errors. It also enters an endless loop to allow you to halt it in various ways with breaks or halt interrupts. Each time an interrupt condition is raised, the program branches to the label of the name of the interrupt. After pausing for you to read the messages, it waits to PARSE a "dummy" answer (not used) and signals the next interrupt condition where it left off.

The program first sets the FAILAT level at 20, using the OPTIONS instruction. Any RC of 20 or more will be trapped and sent to the FAILURE: label. This option is not mentioned in some ARexx documentation. The difference between an ERROR (any return code greater than zero) and a FAILURE (any ERROR at or over the FAILAT level) is to help distinguish usually fatal failures from less severe mistakes. In this example, 'RX' is a valid command utility used to launch ARexx programs, only the program does not



exist. Since the RC of a non-existent program is lower than 20, only an ERROR is generated, and the program branches accordingly. Next we try to launch a totally bogus command, 'FOOBAR', and generate a FAILURE, because RC=20. Each time the program returns to the place it left off by using SIGNAL as a GO TO. Note the way we can use SIGNAL VALUE to evaluate a concatenated expression which becomes "FAIL", causing the program control to jump back to that label in the main program.

Next, after the label UNI:, we enable NOVALUE. Try to enable NOVALUE at the very start of the program. Do you get different results? The reason is that NOVALUE takes precedence over ERROR and FAILURE, because the initial ARexx scan looks for uninitialized variables first thing. You must be careful to enable traps as you need them in the order of precedence. Most of the time an uninitialized variable will cause no harm. If your program needs to trap this condition, it is usually done locally near the place an uninitialized variable may cause a problem, followed by a SIGNAL OFF NOVALUE to disable it again.

The SYNTAX condition may occur frequently, too, because it is found during the initial scan of the program at run time. When a syntax error occurs, RC contains the ARexx error code. Note the way we may use the ARexx function, ERRORTEXT(RC) to display the error message. In this example, we have an invalid argument to the function B2C() converting Binary to Character. It should be composed only of 0s and 1s, but contains a 5.

Next the program starts an endless loop which you may terminate with any of the Ctrl-C, -D, -E, or -F user interrupts, or you may open another shell and issue the command utility, HI to stop things. You may also want to try the command utility TS to force an interactive trace of this loop. You may end the global interactive trace with the command utility, TE. Once the program enters interactive trace, you may issue (at the prompt +> ) any ARexx instructions. If you enter SIGNAL FINI or EXIT it will terminate this loop.

Now you know how to use the ARexx Interrupts. With these tools, you need not be afraid to tackle large projects. You have the means to make your ARexx programs user friendly, able to trap likely errors so that the program will not terminate, but handle exceptions gracefully.

## Listing

```
/* Int.rexx Demo of interrupts */
/* set the failat level */
OPTIONS FAILAT 20
SAY 'FAILAT set to 20.'

/* turn on the interrupts */
SIGNAL ON BREAK_C
SIGNAL ON BREAK_D
SIGNAL ON BREAK_E
SIGNAL ON BREAK_F
SIGNAL ON ERROR
SIGNAL ON FAILURE
SIGNAL ON HALT

/* error */
'RX' nonexistent.rexx

FAIL:
/* failure */
'FOOBAR'

UNI:
SIGNAL ON NOVALUE
/* uninitialized variable */
SAY 'i=v'
i=v
```

```
SYN:
SIGNAL ON SYNTAX
/* syntax error */
SAY 'char=B2C(10115)'
char=B2C(10115)

LOOP:
SAY 'PRESS [Ctrl]-C,D,E, or F to stop endless loop...'
SAY 'OR open another shell and do a HI command...'
SAY 'OR open another shell and do a TS command.'
SAY 'After interactive trace starts, issue EXIT at prompt.'
/* stuck in an endless loop...*/
DO FOREVER
NOP
END

FINI:
SAY 'DONE!'
EXIT 0

/* INTERRUPT LABELS FOLLOW */
BREAK_C:
SAY 'CONTROL C BREAK detected...'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL FINI

BREAK_D:
SAY 'CONTROL D BREAK detected...'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL FINI

BREAK_E:
SAY 'CONTROL E BREAK detected...'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL FINI

BREAK_F:
SAY 'CONTROL F BREAK detected...'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL FINI

ERROR:
SAY 'ERROR detected...'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
branch='AIL'
PARSE PULL answer
SIGNAL VALUE 'F'|branch

FAILURE:
SAY 'FAILURE DETECTED'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL UNI

HALT:
SAY 'EXTERNAL HALT detected...'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL FINI

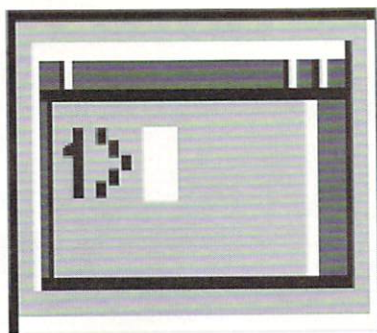
NOVALUE:
SAY 'UNINITIALIZED VARIABLE detected...'
SAY 'Line'SIGL 'RC'=RC
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL SYN

SYNTAX:
SAY 'SYNTAX ERROR detected...'
SAY 'Line'SIGL 'Error'RC': ERRORTEXT(RC)
SAY 'Press [Rtn] to continue.'
PARSE PULL answer
SIGNAL LOOP
```

•AC•

Please Write to:  
Merrill Callaway  
c/o Amazing Computing  
P.O. Box 2140  
Fall River, MA 02722-2140





# cli by Keith Cameron directory

## Readers' Reactions

In my last column I included some script files and other input from several readers. I'd like to continue along the same lines in this column. Personally, I find that there is only so much that one can learn from a book or manual. I know that I have learned probably 90% of what I know of the Amiga from other users. This was especially true in the early days, as documentation was very poor. And, judging by what many of my readers say, they feel that the manuals haven't changed a great deal.

From time to time, I have advised my readers, especially those who are just beginning to use computers, to be sure to make backups of their diskettes and to use the backups rather than the originals for their daily use. In fact, in some places I have worked, we have made backups and then put the originals in fire-proof safes to protect them. Let's face it — some of that software is very expensive. I have gone on to recommend that the originals should not be used except to make more backups when needed. Eric Palmquist of California has written in to correct me.

Eric is one of those people who makes me wonder why he is even reading my column. I'm not complaining; I'm glad such people do read my article. But in one brief letter, Eric demonstrated that he is probably far more knowledgeable about computers in general and the Amiga in particular than I will ever be. According to Eric, a copy of a diskette may actually be superior to the original. I'm not about to try to explain what Eric wrote — it is far too complicated. In short, though, he argues that binary non-linear recordings deteriorate over time. Because of this deterioration, the most recent copy is actually the best copy as regards quality and accuracy. What Eric wrote is enough to convince me, so I stand corrected.

Maxwell Daymon of Colorado wrote in to comment on a statement I made in a previous article concerning cutting and pasting from the Shell. In my article, I said something to the effect that you could not copy from the Shell and paste to a word processor. Maxwell executed the DIR command in his Shell, highlighted the listing, then hit right-Amiga/C to make a copy. He then went to his favorite word processor (ProWrite) and pasted using right-Amiga/V. Maxwell goes on to explain that all software that claims to support version 2.X or later should also support the standard Amiga clipboard. This enables anything copied to the

Amiga clipboard to be copied to the clipboard of that particular application. According to Maxwell, since the advent of version 2.X, this is becoming more and more common. Prior to that, many specific applications used their own buffers for cutting, copying, and pasting. I tried cutting from the Shell and pasting to a couple of other word processors and found that Maxwell is right.

Thanks, Maxwell and Eric, for setting me straight on these matters. It just goes to show that I learn more from other users than from manuals. Now I'd like to share some script files that two readers sent in.

Terry Cripe is a Lutheran minister in Ohio. Terry needed a script file that would search a disk for a certain topic, or word, to help him when he was writing his sermons. Before sharing this script file, let me point out two things. First, since REQUESTCHOICE and REQUESTFILE are used, this script file will only run under version 3.0. Second, Terry has been unable to discover a way to input the search word or phrase in the program. Instead, he must include the search word or phrase as part of the command line. Here is the script file.

```
lab start
set Number 'requestchoice "SEARCHFile" "Which drive?"
df0 mdh0 mdh1 none'
```

```
lab check
if val $Number eq 1
skip df0
else
if val $Number eq 2
skip mdh0
else
```



```

if val $Number eq 3
cd mdh1:
set fname 'requestfile noicons'
skip begin
else
quit
endif

lab df0
cd df0:
set fname 'requestfile noicons'
skip begin

lab mdho
cd mdh0:
set fname 'requestfile noicons'

lab begin

search $fname "$sword" >pipe:SEARCHFile
more pipe:SEARCHFile
echo "You searched *"$fname*" using the word/phrase
*$sword*."
echo ""
ask "Do you wish to search another file on this drive?"
if warn
skip check back
else
ask "Do you wish to search another drive?"
if warn
skip start back
else
quit

```

Once you have this typed in and saved, you are then ready to start searching. At the command prompt, you will need to type SETENV WORD followed by the word or phrase you want to search for. Terry gives the example of WATER, which would appear in this manner:

```
SETENV WORD WATER <RETURN>
```

By the way, SETENV is an AmigaDOS command used to work with global variables.

Finally, Peter Oppenheimer of my neighboring state of New Mexico wrote in with two script files that concern deleting or protecting files. First, here is the script that will protect files from deletion. Peter calls this script "nod".

```

; "nod" for "NO Delete"
failat 10
echo " "
echo " "
ask "Protect from Deletion All files in this directory? ANS: y/n ?
`return`" (on one line)
if not warn
echo " "
echo " "
echo " OK, forget it."
echo " "

```

```

echo " "
quit
else
list >ram:p #? lformat="protect %S -d"
wait 2 sec
execute ram:p
echo " "
echo " "
echo "OK Done. Files in this directory are now Protected."
echo " "
echo " "
echo " "
endif
quit 5

```

Peter's second script is called "yod", and it allows the user to make files in a directory deletable. Here is how it looks:

```

; "yod" for "Yes, Of course you can Delete"
failat 10
echo " "
echo " "
ask "Change protection bit of all the files in this directory to allow
deletion? y/n ? <return>" (all on one line)
if not warn
echo " "
echo " "
echo " OK, Won't do it."
echo " "
echo " "
echo " "
quit
else
list >ram:p #? lformat="protect %S +d"
wait 2 sec
execute ram:p
echo " "
echo " "
echo " "
echo "OK Done. All files are now Deletable."
echo " "
echo " "
echo " "
endif
quit 5

```

Now for my disclaimer. I have changed very little in these script files. Whether they work on your machine depends on the system you have. You may find it necessary to make some changes to adapt it to your particular setup.

I appreciate all of your input. Most of all, I appreciate your reading my column. Until next month, keep on computing!

•AC•

*Please Write to:*  
**Keith Cameron**  
*c/o Amazing Computing*  
**P.O. Box 2140**  
**Fall River, MA 02722-2140**



# Aladdin-4D Tutorial #10:

## Lens Flare Creation and Use

R. Shamms Mortier

ADSPEC's Aladdin-4D has the most spectacular and variable on-board Lens Flare mode of any Amiga 3D software package. That is due to the fact that A4D Lens Flares are not locked in by the software itself, but instead determined by any bitmap (including IFF animations) targeted to it. The image of the "Flare" (in A4D they're called "Flares" instead of "Lens Flares") can be absolutely anything (including text or a logo if you like).

Just to remind you what a lens flare actually is and isn't. It isn't a light itself, but is the result of light on a camera lens or on the lens of our eye. I'm sure you've looked up at a street light and have seen an aura around it, or at video footage that shows spots when the camera is aimed at some angle to the sun. These are anomalies of the viewing mechanism (camera or the eye) and not the light "object". Very spectacular effects can be created by manipulating lens flares. I'll share some info on a special lens Flare bitmap option later in the article. Right now, let me clue you in on the extensive nature of A4D's Flare requester and the associated "Texture List".

### Options without end

When it's time to add a Flare in A4D, the initial process begins by accessing the Flare requester, which is located under the "Polygon" heading in the menu bar. There are two choices: Flare Add and Flare Alter. The second choice holds if you want to reconfigure the Flare's parameters. The Flare Requester is a simple enough affair (See Figure 1). At the top is the familiar timeline bar, allowing you to determine exactly where a Flare appears in the animation. By selecting "Add" you can also layer as many Flares as you'd like, or have them all appear sporadically for a frame at a time, giving you flashes and/or sparkles.

There are five separate toggles in the center of the requester that effect the added Flare in ways you should become familiar with:

**ZBuf**—If ON, the Flare is partially obscured by polys in front of it.

**Obscur**—if ON, effects the way Flares are seen through transparent polys.

**SEdges**—Flares will completely disappear when they leave the render screen.

**ObsTrn**—(Obscur must be ON) if OFF, Flares lose strength if they pass behind transparent polys. If ON, Flares will be seen right through the poly.

**Size**—there are two choices, "Relative" and "Fixed". If Fixed, the input areas below that refer to height and width relate to the render screen size. If Relative, the relative distance is taken into account.

Next comes Entry/Exit values for five items:

**Flare Width Percent**—render width of the Flare bitmap (can change over time).

**Flare height Percent**—render height of the Flare bitmap (can change over time).

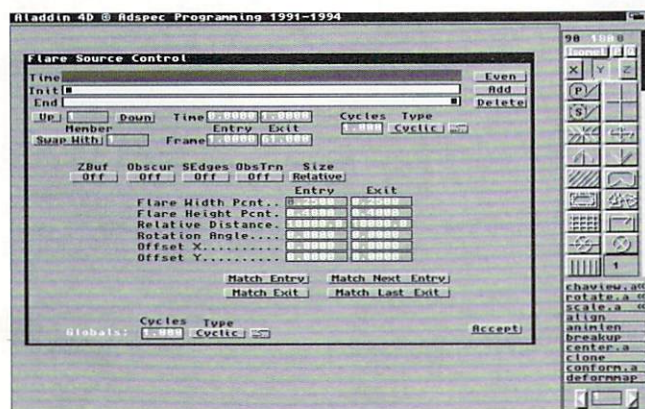


Figure 1. The A4D Lens Flare requester is as full featured (and similar in use to) the other timeline requesters. Separate start and end parameters can be set to allow a Flare to change over time.



Figure 2. By moving the red timeline to only half of its possible width (which in this case indicates frame 30 of a 60 frame sequence), you can guarantee that the Flare will disappear after half the animation is rendered.



**Relative Distance**—if size is set to "Relative", the Flare is treated like a 3D object in space.

**Rotation Angle**—yes, all Flares can rotate over time!

**Offset X / Offset Y**—offsets the bitmap away from the targeted Flare.

The number of cycles (cyclic or periodic) can be set according to timeline or global parameters. Periodic cycles loop back on themselves, reversing direction over the length of an animation. There is also full C-Spline ("Control" Spline) possibility in the requester. What this makes possible is internal looping of the animation within its own timeline. A4D offers C-Splines in every possible animation and object movement situation, so learning the process by which C-Splines are manipulated once holds true for all C-Spline controls.

### Gotta have them textures!

No bitmap texture, no Flare object. It's that simple. The program reads the bitmap as a luma signal, which gives a Flare its reflective light quality. A4D renders bitmaps in such high quality that even when you come in extremely close, the smoothing is amazing. This means that a Flare bitmap can move in an animation so that its target point renders at perhaps five or six times the bitmap size, and you'll still see an even glow minus the jaggies! This is a most telling effect when used to create explosions or other bursts of light. Pixel edges are smoothed right up to screen sized dimensions.

### BitMaps with a Flare

So where do you get the right bitmaps for Flare effects. Well, one source would be the library of special Flare bitmaps that come with the software. Then of course, there are the purists who are determined to draw everything they use from scratch. But I've discovered another way to get awesome Flare bitmaps, although it means owning another piece of software.

### ImageMasterRT

BlackBelt Systems has been in the Amiga image business for a very long time. Their best known software is a package called

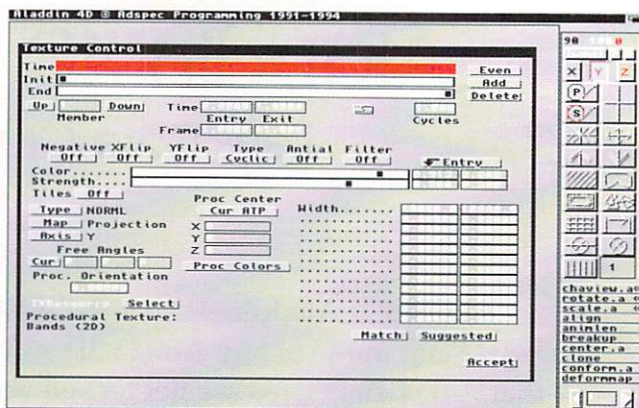


Figure 3. As with any other object, Flares can be texture mapped, in fact, they MUST be texture mapped in order to take on the shape of the bitmap. The texture can also be an animated series of IFF frames, allowing you to create Flare explosions, super-novas, and any optional glowing Flare object you can conjure up. Multiple textures can be mapped one on the other using the "add" function in the timeline.

ImageMasterRT (the "RT" stands for "Re-Targetable", meaning that it can address various 24-bit boards as output in addition to standard and AGA Amiga screen modes). ImageMasterRT is one of the best image processing programs on any platform, and definitely one of the best on the Amiga. It's a very complex piece of software, but for our purposes here, it contains two modules that are just right for creating Flares for A4D: Asterize and Annular. Asterize produces star effects, and Annular produces glowing rings (See Figure 5).

ImageMaster expects you to load in a graphic (and it accepts many file formats). I always use either a HAM8 picture or a 24-bit IFF file (it'll load JPEG'd images just fine). For this tutorial, I suggest that you first generate a completely black picture in your favorite painting program, and save it out to disk. Then, after booting ImageMaster, import that same page as your canvas. ImageMaster has dozens of nested menus and requesters, so pay close attention while I tell you how to get to the place we need to

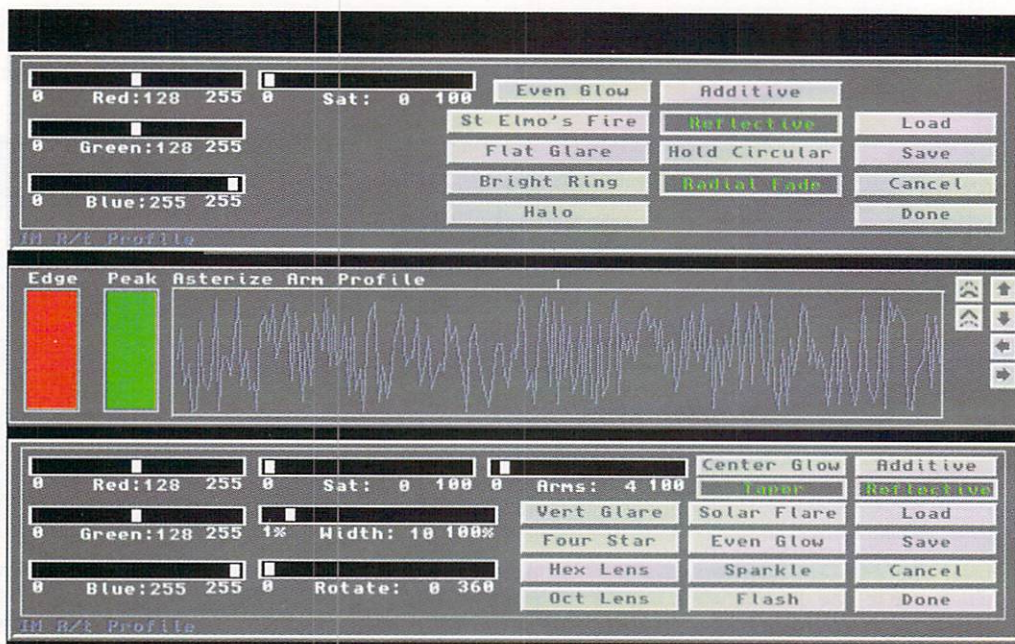


Figure 4. The most extensive software anywhere for creating asterized stars and annular rings, the very stuff of Lens Flare objects, is the awesome ImageMasterRT package from BlackBelt.



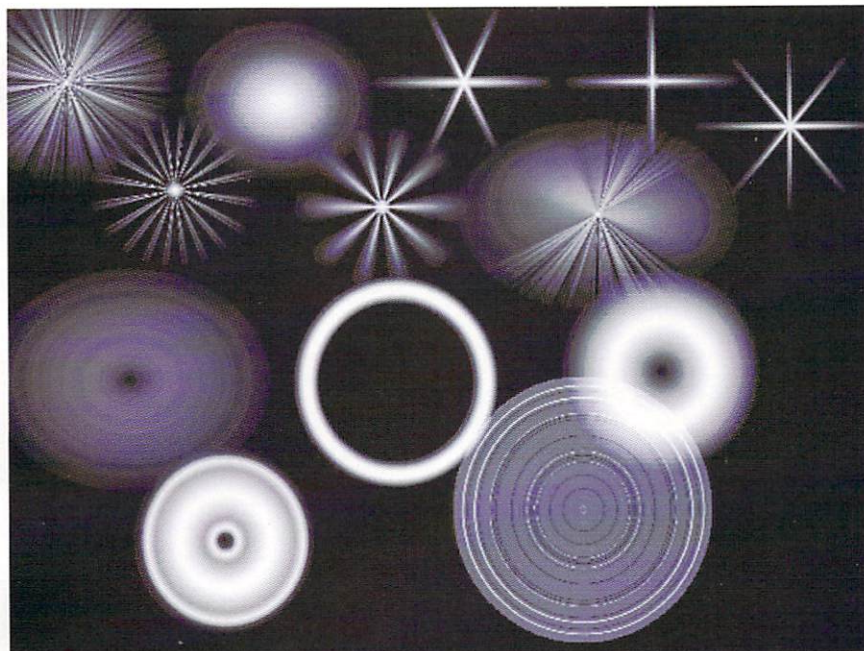


Figure 5. Here's a sample of the numerous varieties of lens Flares and Annular Rings that you can create in ImageMasterRT.

I created a whole library of asterizations and annular ring bitmaps with ImageMasterRT and saved each out as a 24-bit brush. Mapping them on A4D Flares was an easy task, and gave me some spectacular animated results.

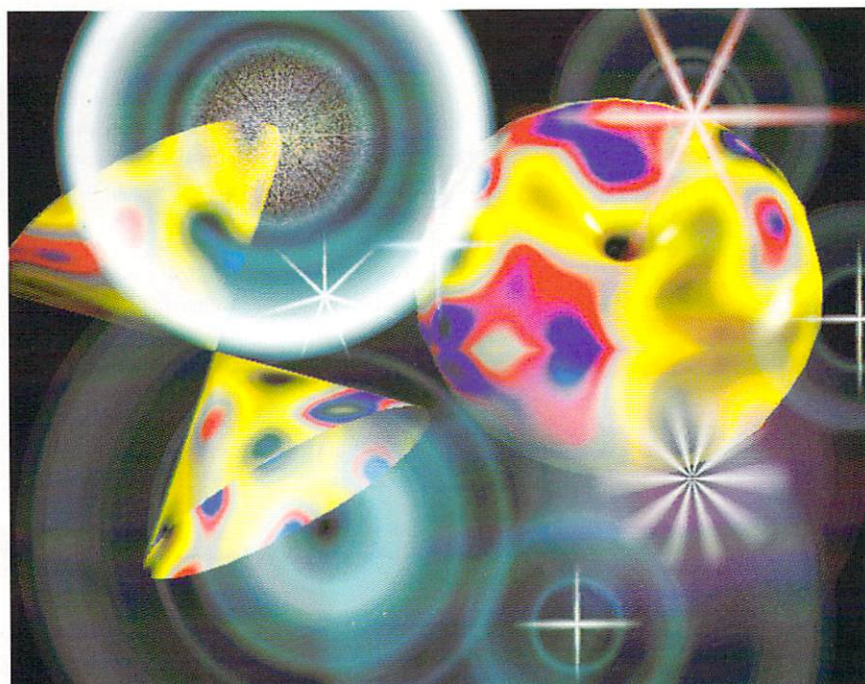


Figure 6. An A4D rendering of one frame of a 60 frame animation with ImageMaster bitmapped Lens Flares and Annular Rings in place.

access. We are looking for the "Asterize" and "Annular" Special FX modules. They are nested as follows from the main screen: Process / Special Fx / and then to the second of the two Special Fx screens.

Here you will see both needed modules. Clicking on either one will blank the screen, allowing you to draw an area that will be the target of the effect. Once you have done this, and depending which of the two you selected, their parameter menus will appear.

If you've chosen "Asterize", the following choices are available (along with an interactive graph of the shape): Vertical Glare, Four Star, Hex Lens, Oct Lens, Solar Flare, Even Glow, Sparkle, and Flash. Each of these can be manipulated any number of ways, my favorite being to draw on the graph of the chosen asterization.

Annular (Annular Rings) gives you these additional possibilities (also with interactive graphs): Even Glow, St. Elmo's Fire, Flat Glare, Bright Ring, and Halo. These can also be altered by toggling four subsequent options: Additive, Reflective, Hold Circular, and Radial Fade. Both Asterizations and Annular Rings are open to palette manipulation and the setting of the dimensions of their radial "arms" when appropriate.

I created a whole library of asterizations and annular ring bitmaps with ImageMasterRT and saved each out as a 24-bit brush. Mapping them on A4D Flares was an easy task, and gave me some spectacular animated results. These two software packages were made for each other, especially when it comes to securing the right bitmap for an animated Lens Flare sequence. By the way, the Annular Rings also make wonderful planetary rings when used in A4D to orbit a planet.

ENJOY the exploration. See you next time in ROMulan space...

•AC•

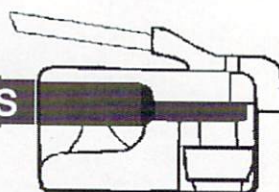
*Please Write to:*  
**R. Shamms Mortier**  
*c/o Amazing Computing*  
**P.O. Box 2140**  
**Fall River, MA 02722-2140**



# on line

## amiga telecommunications

by  
Rob  
Hays



You may recall that at the end of last month's On Line I mentioned that we would visit a new network this month. Well, we all know the old quote about "The best laid plans of mice and men..." Apparently as I was typing those words, the network was unplugging its phone lines. The National Videotext Network has at least temporarily suspended operations. This may change by the time you read this article, due to the lead times inherent in magazine publishing. If NVN returns to the on line community, we will visit them at that time.

The other major information services, America Online and Prodigy, both require machine-specific front end software that is not available for the Amiga. Since this concludes our tour of the Amiga areas of the major services, we will shift gears somewhat and look at some of the software

available on the services we have covered. This does not mean we are going to ignore that grand collection of networks known as the Internet. It is only that the Internet is so different from the systems we have previously visited, that a division seems in order.

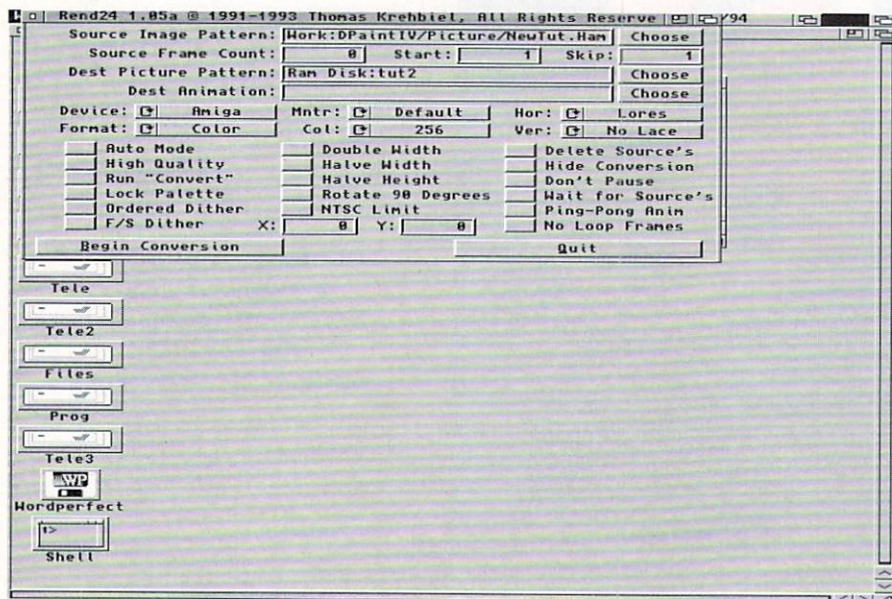
The format for the column will change also, with the majority of space being given to mini-reviews of downloaded programs. At the end of the reviews section will be file numbers/names of the programs and the services where I found them. If you see something listed that you decide to download for yourself, keep a couple of things in mind. First, due to the time delays mentioned above, there may be a newer version of the program available by the time you read about it. You should always do a search of your favorite system's data libraries before downloading files I

mention. Secondly, if a program is shareware, please support the author and send in the requested shareware fee if you like the program and use it. This will encourage the programmers to keep working on quality software for our favorite computer. To this end, I will mention a program's status (shareware, freeware, commercial demo, etc.) in the descriptions.

### Rend24

What do you do when the graphic file you have is in the wrong format? Maybe it is a 24-bit IFF file that you need to convert to HAM, or maybe you downloaded a GIF format file you want to view in HAM8. While there are commercial programs available, such as ASDG's Art Department Professional, the casual user has trouble justifying their expense. Enter Rend24, by Thomas Krehbiel. This shareware program (\$30 requested) will do all of the above and more. Its original purpose was to run in the background while Lightwave generated 24-bit IFF frames. As each frame was saved to disk, Rend24 would read it, convert it into an Amiga display format, pack it into an animation file, and then wait for the next frame.

The current version, 1.05a, among other things can view JPEG files directly. A graphical front-end makes use of a simple point and click matter. Choose an image,



Rend24 converts 24-bit IFF files to HAM, GIF to HAM8, and more.



and a destination, tell Rend24 how you want to change the format, and away it goes. You won't have to wait forever for the conversion. While some processes take longer than others, all are reasonably quick. All Amiga video modes are supported, including all of the AGA modes as well as HAM-E and DCTV formats. Two types of dithering are available for your images, one useful for greyscale images, one for color. You can also change the vertical and horizontal sizes, rotate the images, and more.

Rend24 runs on any Amiga, including systems running Workbench 1.3, and there are no specific memory requirements. Remember that 24 bit images require a lot

Viewtek 2.1, also by Thomas Krehbiel, is a program designed to make viewing graphic and animation files quick and easy, no matter what their format.

of room, and the author recommends at least three megs of ram for 768x480x24 images. Since the only Chip ram used is for the actual display of an image, this should not be a problem.

The distribution archive includes the program, documentation, three libraries that are used by the program, and a script to install them in your Libs drawer. Also included is a small version of the following program.

#### Viewtek

Viewtek 2.1, also by Thomas Krehbiel, is a program designed to make viewing graphic and animation files quick and easy, no matter what their format. A copyrighted but freely distributable package, the large archive contains eight versions of the program, a general purpose version, and specific versions for each of seven different display cards. The documentation is in AmigaGuide format. Workbench 2.0 or higher is required.

When used from the Workbench, VT opens a standard ASL requester for your selection. It will automatically decode the type of file you are trying to display, and make any changes necessary depending on

your hardware. Tool Types are used to give the Workbench user the same flexibility as the Shell command line. This flexibility includes specifying delays, animation speed, memory usage, and more.

#### Where?

These programs can be found in all of the Amiga sections of the various networks. In the AmigaArts section of CompuServe, look for RND15A.LHA, and VTEK21.LHA. In the Starship libraries on GENie, Rend24 is file #18420, and Viewtek is file #22806. On Delphi and Portal, the simplest way to find the files is to do a keyword search. The systems then display the appropriate files and ask if you wish to download. Use Rend24 and Viewtek as the keywords.

Rend24 is 131,456 bytes long, and at 2400 bps will transfer in about 11 minutes. Viewtek is 434,991 bytes and will keep your modem busy for about 35 minutes.

#### How to reach me

R.Hays5	on GENie
RHAYS	on Delphi
72764,2066	onCompuServe

InterNet users, the quickest response will probably occur if you use:  
R.HAYS5@GENIE.GEIS.COM

For U.S. Mail:

Rob Hays  
P.O. Box 194  
Bloomington, IN 47402

Please include a SASE if you need a personal reply.

If you run an Amiga specific BBS, send me the information callers will need to access your system. Phone number(s), modem speeds, software settings, etc. As a service to the Amiga community I will include the information I receive in this column from time to time. Send the info to any of the addresses above.

That is all for now. Next time we will take a look at ray tracing software and more. See you on line!

•AC•

# VideoStage Pro™

## Low-cost, Full-featured Interactive Authoring System

VideoStage Pro sports dozens of features not found on any other authoring system. An easy-to-use interface, wide variety of professional quality transitions, timeline view and niceties such as automatic checking for video "hot colors" make creating animated titles and syncing sound to graphics and animations a snap. Over 60 transitions, backdrops, fonts and button brushes give you the tools to get you started today! Plus use any of your own IFF or Anim 5 files. Support for several sound formats including AudioMaster and MODS. Create stand-alone kiosks or add remote control feature of VideoStage Pro + and remotely manage multiple kiosks via modem or networks plus scheduled show play and more!

"Video Stage Pro is clear and very easy to get the hang of. It's probably easier to use than the Workbench."

"VideoStage Pro can be used on so many different levels. You can create snazzy logos for your home videos, or produce professional presentations"

Amiga Format March 1994

**VideoStage Pro \$179.95 MSRP VideoStage Pro + \$499.95 MSRP**

Upgrades from VideoTitrer or ANIMagic to VideoStage Pro available

Distributed in Canada by Info Touch Systems, Inc. #105-13483 78th Ave. Surrey, BC V3W 2Y2 Phone: 604-572-4636	Published by Oxxi, Inc. PO Box 90309 Long Beach, CA 90809 Phone: 310-427-1227 FAX: 310-427-0971
---	---

  
Oxxi inc.  
Call for Demo Disk!

Circle 159 on Reader Service card.





# Feedback

## Letters to the Editor

### The Amiga Remains Prime Technology Were the Amiga's Problems all Commodore's fault?

Dear AC,

Seldom do I differ with the Bandito, but I cannot agree with his opinion that the Amiga is an un-adoptable orphan. The time is not ripe for the passing of our favorite creative tool. In many very important ways, the Amiga is still in a class by itself. The competition has been building on inferior foundations. As an Amiga software developer, I am encouraged about the passing of Amiga technology into new hands, (although I mourn the lost jobs at Commodore). I plan to immediately increase my support and development.

Sometimes I must use other computers, and the more I do, the more I love my Amiga. The top-of-the-line software for the Amiga equals or excels what is available for other computers: VideoToaster, OpalVision, Montage, Final Writer, SBase, ARexx, and the many superior paint, animation, hypertext/media, music, etc. programs give us a wealth of inexpensive and creative tools unrivaled on any platform. Add to that the millions of dedicated users, hundreds of innovative software and hardware developers, and this combination hasn't been matched. Sometimes I ask myself, even if I was rich and could afford any other computer system, would I trade? When I look around, I don't even find a close second for my needs. Could I enthusiastically recommend anything else to another creative person? I don't think so.

The Amiga has a lot of intangible assets in all the people who use it and support it. These may not easily fit into a financial forecast, but must be recognized by the new Amiga technology owners. We are not easily discouraged. The pasture doesn't look greener on the other side, and isn't likely to for a number of years. Add to this, the huge collection of software in the Fish collection, the wide variety of development tools, the loyal and enthusiastic customer base, the many applications for the Amiga, the hundreds of TV stations daily displaying its capabilities and the industry-shaking peripherals by ground-breaking companies like NewTek, GVP, OpalTech and others how could it be prudent and rational to drop the Amiga now? Its possibilities are better than ever. If you have been studying the future direction of software, it happens to be in the new kinds of network parallel processing described in the book *Mirror Worlds*. This type of software will run best with processor and memory efficient operating systems that multitask

superbly. Hmm....know anything like that? We now have the language to get started in TorqueWare.

The Amiga has had nine years to develop, mostly left alone by the blind mass of computer manufacturers trudging in the footprints of IBM. We have developed a huge storehouse of capabilities that will be difficult for newcomers to match. The Amiga was ahead of its time when it came out nine years ago, and is just now coming into its prime.

Jack Seay  
owner-Neuralink  
Lubbock, TX

Commodore Marketing...the cause of our troubles?

I'm writing this article on our excellent, exciting Amiga 4000 computer. On the other side of the room, one of my children's friends is enjoying the excellence and excitement of our Amiga 1000, which has enjoyed the attention of all of the neighborhood young people since 1986. Despite the fact that these two computers embody just about everything that computer users have sought for the past ten years, the children who get turned on to computers by using our Amigas live in homes and schools where the Amiga is never considered a viable option to purchase. I could almost echo the cry I've seen in print so often, "If only Commodore would get off their \_\_\_\_\_'s and market it right, then Amiga sales would be more than enough to support the product". Notice I said, "Almost". With 20/20 hindsight, I'm seeing a bigger culprit than Commodore marketing strategy (or lack thereof).

When Commodore introduced the Amiga 1000 in 1985, the company was taking a daring step at a crucial time in the short history of computers. Here's how it looks from my perspective.

During the fifties and sixties, as International Business Machines grew from a small accounting equipment company to the worldwide leader of a new industry, the image of white-coated IBM intellectuals was iconified in movies and TV, an image of barrier-breaking progress. This image was both lauded and feared, but it became thoroughly integrated with the American self-image.

Those computers were mainframes, and belonged to the realm



of huge corporations and government agencies. Bureaucracies were the only entities that could command the large amounts of money necessary to build, program, and maintain computers. They employed intellectuals to actually run the machines, an uneasy partnership that put man on the moon and computer-generated bills in every mailbox. This time period also solidified a distinction of newly-powerful intellectuals from "ordinary people", whose lives were shaped by more traditional forces of society. (You've run into those forces — "It's WHO you know, not WHAT you know" is one of them.)

This situation caused friction. Depending on your viewpoint, it ran a little like this:

WE were intellectual and forward-thinking, while  
THEY were "bean-counters" and "yes-men".

OR

WE were civilized, businesslike or professional and  
THEY were "nerds" and "egg-heads".

In the seventies, some small electronics start-up companies managed to break some barriers and offer computers that individuals could afford. These "micro-computers" (Altair, Radio Shack

game changed.

When the IBM PC was introduced by IBM, Intel, and Microsoft, the concept of personal computing swept through the IBM marketing channels, reaching and encapsulating people who would never find out that other options existed for them.

IBM's PC junior was a computing flop and a marketing success that gave the first real hint of the weirdness that was to follow. It was a watershed event that sent a clear message to all micro-computer manufacturers. It showed that IBM could somehow manipulate the market even without a viable product. The whole world (almost) stopped and waited to see what IBM would do next. Apple introduced the ground-breaking Macintosh, but the world still waited.

Competing micro-computer companies reacted in different ways. Tandy sidelined its Color Computer line in favor of PC clones. Tandy's background still showed in their user-friendly desktop and their continued emphasis on color and sound, but the spark was gone in the name of compatibility. Texas Instruments backed out of the mass market completely. Several other companies disappeared. Apple, buoyed by its consistent, continuing sales of high-priced Apple II's to schools, doggedly promoted the Macintosh—a totally mouse-driven, graphical environment,

---

The quirky thing is that while computer hardware and software are physical versions of fast-changing intellectual concepts, those social forces involved in large business and mass marketing run on fame and fortune—that is, social position and money.

---

Model 100, Commodore PET, etc.) were marketed to hobbyists and enthusiasts, who built and programmed them for the fun of it. They made their computers into tools that were increasingly useful to them, and these early systems matured into products like the Tandy (Radio Shack) Color Computer, the Apple IIe, Texas Instruments TI-99, and the Commodore 64, a spunky, durable machine that sold more units than any other computer in the world. (And that, unfortunately, got the attention of the mainframe makers and users.)

Maybe it was inevitable, but the low prices, appealing graphics, color, and sound that promised micro-computing a potential main-stream market also moved it into a market where the rules of success were different. In this market, quality was defined in different terms. The decision to buy a computer was not as likely to be made by an interested, intellectual experimenter making purchases for his or her own use, but by someone who was either part of a bureaucracy and buying for a bureaucracy or someone who was an inexperienced individual getting along by using the standard social crutches ("What does everybody else have?").

The quirky thing is that while computer hardware and software are physical versions of fast-changing intellectual concepts, those social forces involved in large business and mass marketing run on fame and fortune—that is, social position and money. It's a completely different frame of reference. There is really only one computer company that's been around long enough to be socially dominant in the public unconscious — IBM, the old mainframe company, which by the end of the seventies was starting to be interested in the potential of micro-computers. IBM channelled part of its established resources into the game and the

stubbornly maintaining its identity as the "computer for the rest of us".

Atari and Commodore didn't backpedal, but pushed forward into new territory with the Atari and the Commodore Amiga. They brought the best of all possible computer worlds to the market—graphics, color, sound, mouse-driven interface AND a command line interface. In addition, the Amiga pioneered built-in speech, multi-tasking, modular program functioning, and file sharing, all with 512k of memory. Multi-tasking, in particular, was a little-understood and technically difficult accomplishment that is just now being attempted by the current crop of computers. No one in the non-Amiga world seemed to realize what it was for, but once you got used to it, anything else was trash. This was the bold step that Commodore took, to invest everything in the future of computing, not to conform to the prejudice of the marketplace. I shudder to think what the world of computers would be today if they, too, had taken the safe route and become builders of PC clones.

Early Amiga users never dreamed PC's could be competition. How could we take a 2-color, dull, hard to learn, computing environment seriously? What we didn't know was that the Amiga was just as invisible to the mainstream world. The Amiga was not "what everybody had". (Neither was the IBM PC, but the force put in motion by name recognition isn't subtle enough to recognize that). Amiga advertising served only to whet the public appetite for exciting computers. At that point the cultural immune system kicked in and sound bites like "Amiga is just a game machine" and "Nobody was ever fired for buying IBM" were enough to bring any wayward stragglers back to the PC fold. Amiga may have looked like fun, but colors and sound couldn't have any use for the serious



SOMETHING EXCITING IS HAPPENING IN

# ST. LOUIS

SATURDAY, OCT. 29<sup>th</sup>

## GATEWAY COMPUTER SHOW

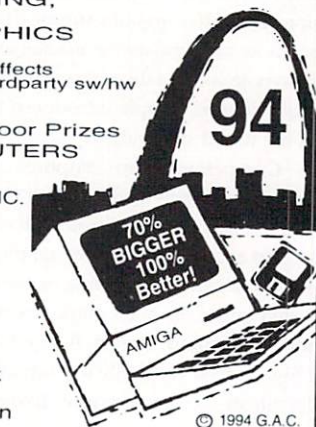
FEATURING:  
DESKTOP PUBLISHING,  
DESKTOP VIDEO,  
ANIMATION & GRAPHICS

CLASSES:  
—DPaint & Special Video Effects  
—Toaster Tips & Tricks & 3rdparty sw/hw  
—Desktop Publishing  
—ARexx for All of us

DEALERS, Demos & Door Prizes  
USING AMIGA COMPUTERS

SPONSORED BY:  
GATEWAY AMIGA CLUB, INC.  
P.O. Box 811, Bridgeton, MO 63044

Admission: \$ 5.00 each  
Classes: \$25.00 each  
Time 11:00 - 6 p.m.  
Date: October 29th  
Location: Machinist Hall  
Bridgeton, MO next to  
Target near the inter-  
section of St. Charles Rock  
Rd and Natural Bridge Rd,  
just northwest of intersection  
of I-70 & I-270.



For Special airfare & hotel  
rates, call: Best Way Travel  
at (800) 325-4942 & say  
"I'm with the Gateway  
Computer Show."

Fly TWA, our Official Airline

Order classes by Oct 1 & get one free admission to the show  
for each class ordered. Mail check to G.A.C. Name classes  
desired and state your name, address & phone. Allow 3 weeks.

professional, could they? Brand-new companies could sell PC clones by the thousands, but that's because the mass mindless mind called them IBM-compatible, and the name-recognition still held.

The most effective strategy in PC advertising has been a social ploy that's old as the hills. The PC-clone companies simply refuse to admit that they have any competition. And it works. Once, just once, I saw an advertisement for a prominent PC clone that said it could run Windows "as fast as a graphics machine". The ad never ran again.

So has it always been a lost cause? Was there never any way for our favorite computer to be accepted for its capabilities?

Actually, it almost happened. It took an effort of multinational proportion to keep the Amiga down. Commodore made the Amiga functional in 512K RAM on a single floppy, but it was crying to use more. (The real breakthrough came with 1MB RAM and any hard drive.) When the Amiga was introduced, the price of RAM chips was about \$3 each, cheap enough that Commodore could realistically introduce a machine that could utilize 8MB of RAM. Hard drives were expensive, but they were coming down. Can you imagine the impact if the first A1000 owners had upgraded to higher RAM at the onset instead of several years later?

At the exact time the Amiga was introduced, "American computer and chip manufacturers", which doesn't mean Commodore, lobbied President Reagan and the US Commerce Dept. to investigate the "dumping" of cheap Japanese RAM chips. (Intel was a big part of these proceedings.) A trade agreement was reached on July 30, 1985 that caused the prices to double, triple, and quadruple immediately, effectively keeping available RAM in the hands of corporate buyers and keeping the Amiga community

waiting to realize the potential only they could see. (PCs, by the way, couldn't use more than 640K.) Chip prices reached as high as \$15 each, settling around \$12 at the end of two years. In November 1988, NewTek was quoted as waiting to ship its Video Toaster "until the price of chips comes down."

At the end of that time, when prices began to fall and Amiga users raced to buy RAM, the world received the announcement that "Windows" would be available "real soon now". Well, it wasn't soon, and it didn't run, (and it still doesn't, quite) and it would involve huge amounts of equipment (new computers, new processors, huge hard drives, massive amounts of RAM), but the news was enough to keep the IBM world focused on IBM-compatible machines. Somebody's purposes were served, don't you think?

Was it deliberate or coincidence? Who can say? Some things are bigger than we are, and hard to see, much less to deal with.

At any rate, I've been uncomfortable with most of the Commodore bashing that goes on. From a personal perspective, I have had almost 10 years of working with a highly-advanced multimedia computer, an experience that was not available from anyone but Commodore. The Amiga is an integral part of my life, and I have the Amiga community, especially Commodore, to thank for that. I want to say thanks to the many people who put so much of their lives into what turned into a thankless job. They really did change the world. Is this a swan song? Are we looking at the end?

Not unless we dump everything and run. Some people will do just that. I don't know about yours, but my computer still has a lot of life in it. We can extend that life by continuing to support each other and the developers who work for us. We can USE the tools we have on our Amigas, spending a little more time in making ourselves proficient with what we have. I know it's the American way to check the newest catalog to buy more power, but you get more satisfaction from being effective at using the power you already possess. I'm not sure what hardware I'll be using in the year 2000, but I expect to be working with Amiga. By that time, we should be able to run Amiga on any platform we want, as long as we remember that we want to.

Sincerely,  
Margaret Hettinger  
Lebanon Jct, KY

*While I personally do not share all of Ms. Hettinger's views, I believe it is important to consider what she has said. There are a lot of reasons for the Amiga receiving such an abominable turn of events. Certainly Commodore and its management have a fair portion of the blame. However, market factors, economic trends, public acceptance, are all phrases for a portion of our lives which is forever out of our control. It is an area where we react rather than act. Is it a conspiracy between people with a separate agenda, or is it the natural result of chaos in action?*

*Whatever the case, as the Amiga is prepared for its next entry into the marketplace, we must be prepared to recognize and counter the forces Ms. Hettinger described whether they are apparitions of apathy, or the best laid plans of others. —Ed.*

If you have a letter for Feedback, send it to:

Feedback  
clo Amazing Computing  
P.O. Box 2140  
Fall River, MA 02722



# Custom Textures Background And Texture Maps Made Easy With Your Favorite Image Processing And 3D Animation Software

by William Frawley

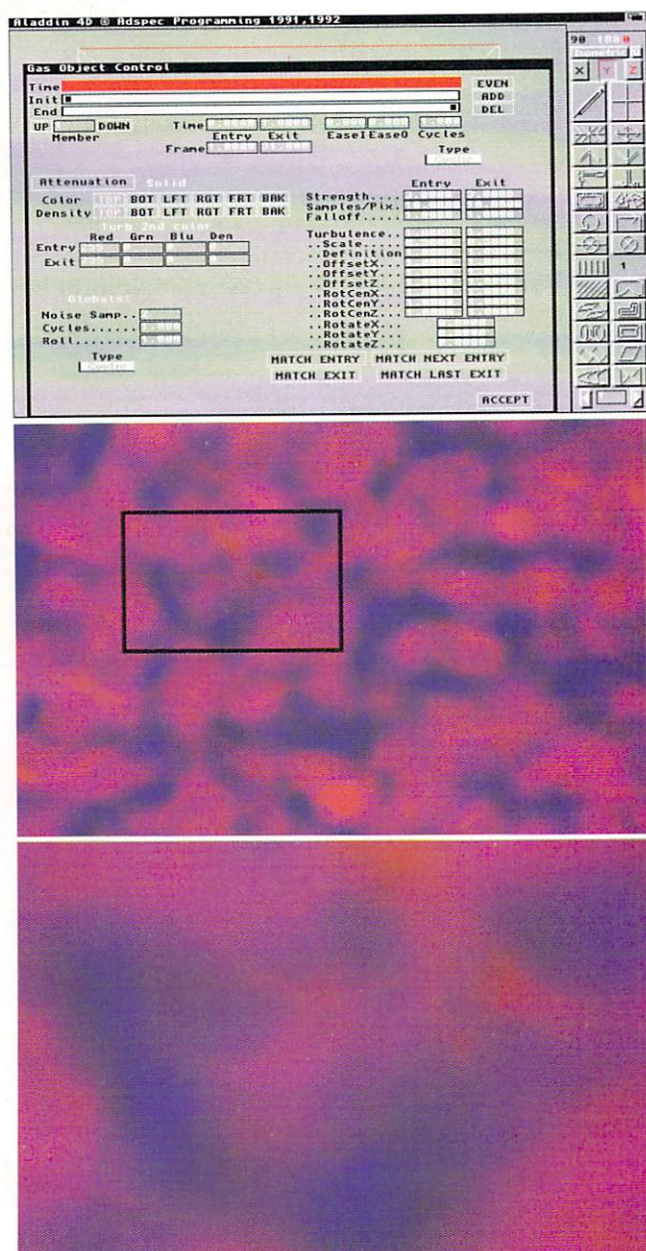


Figure 1: Using Aladdin4D's Gas feature (A-Top), creating background images is easy (B-Middle). For a more subtle look, consider cropping a section and enlarging it (C-Bottom).

Caught amidst the burgeoning professional texture market catalyzed by the increased storage capacity of CD-ROMs, we Amiga artists, animators and graphic designers may easily neglect our favorite tools of the trade for their own ability to manufacture many of these same types of computer generated imagery such as 3D image maps and backgrounds for video titling and desktop publishing projects. With a few simple procedures, you can be producing your own background images and texture maps to add that all important detail required for quality results.

For example, with a few clicks of the mouse, Aladdin4D's extremely well-implemented gas feature can create a full-screen, softly diffused nebula ideal for use as a subtle backdrop for video titles or even inclusion into a full-color brochure. Additionally, for those 3D animators like myself biased toward sci-fi themes, your preferred image processor under ARexx control can readily produce an image of randomly-placed greyscale panels. This image could then double as both a diffusion and specular texture map to give your fleet of starships that professional "Babylon 5" look. Finally, for those of you with flatbed scanners or video digitizing capability, take the time to explore your surroundings for objects with interesting surface properties. These surface textures once magnified may provide you with just the right reflection map for your client's flying logo.

Once you become familiar with the techniques described below, you'll be hard-pressed not to come up with a new texture or backdrop for your latest project. So read on grasshopper.

## Backgrounds Courtesy Of Aladdin4D Gases

Actually, this month we'll just be getting our feet wet with this most excellent feature of Aladdin4D. Next month's topic, incidentally, will serve as a temporary shift in this column's emphasis from 2D image processing toward 3D animation and modeling techniques beginning with a complete tutorial on Aladdin4D gases. For now however, we'll take a look at just what we need to know to create a nice, nebulous background of swirling colors.





ATTENUATION:	Solid
TURB 2ND COLOR:	255, 0, 0
STRENGTH:	3
SAMPLES/PIX:	10
TURBULENCE:	1

Exit this requester and notice the box rotating in the center of the view screen. This is the bounding box for the gas which should still be in the selected state. Press the space bar to stop the view rotation. There are three absolute requirements in order for a gas to render — it must have some Transparency in its Attribute list, it must be Phong shaded, and the Render Options must have selected both Transparency and Phong. Let's take care of these now.

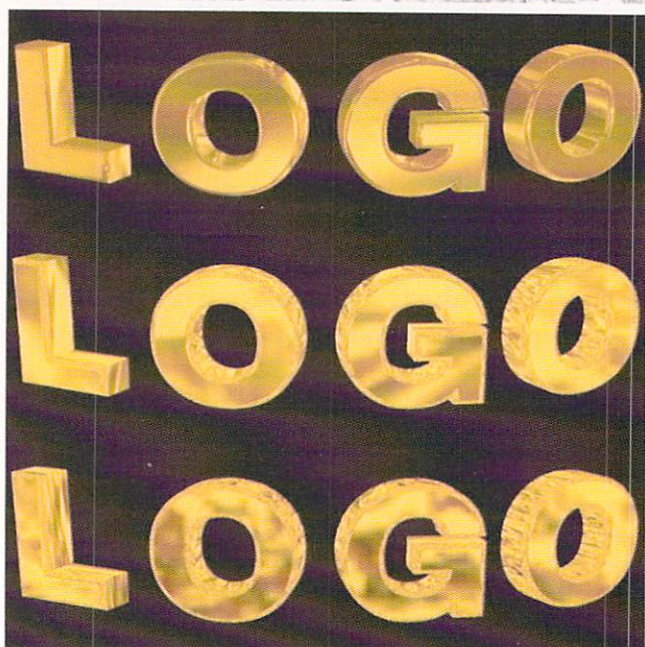
With the gas still selected (bounding box edges are red and white), select the Polygon/Attributes... menu item. Work your way to the AttList Member Control panel after creating a new Attribute List in the AttList Control requester. Once there, change the color of the base polygon (gas in this case) to blue with the RGB sliders (0,0,255) and set the Transparency to 1. Exit this control panel, rename your Attribute List to "BlueGas" and Accept the next two requesters.

While the gas is still selected, open the Shading Assign panel with the Polygon/Shading... menu item. Turn on Phong and exit this requester. Now open the Fill Defaults control panel under

---

With a flatbed scanner or video camera for digitizing, creating a versatile reflection map for your 3D objects is a breeze. Simply scan or digitize a piece of aluminum foil in various stages of disfigurement

---



**Figure 2 (above):** Scanning or digitizing aluminum foil in various stages of crumpledness (A) provides an excellent image for reflection mapping onto a 3D object (B), thus providing virtual clues to the object's reflected environment.

To begin, run Aladdin4D (I'm using version 2.1m) and create a gas using the menu item Polygon/Gas/Add. You should now be looking at the Gas Object Control requester (Figure 1A). For our purposes here, let's try to create a blue gas with red turbulence. Briefly then, if you're totally unfamiliar with Aladdin4D gases, just remember that turbulence is the fractally-created stringlike filaments running through the more-or-less solid base gas. It is this aspect that determines the overall "character" of the gas. While in the Gas Object Control requester then, change the following parameters leaving everything else at its default:

View/Render Options... in the menu and activate Light, Fill, Textures, Phong and Transparency. While still in this panel, select the Set Screen Mode button and choose the appropriate screen mode that you want your image to render in.

Now before rendering, we need to size the gas so it fills the entire screen. For this, select the Resize tool (3rd up from the bottom right) and drag out the gas bounding box both horizontally and vertically past the edges of the view screen. Now you can finally set the gas with a click of the right mouse button. Press Shift-F9 to render the image.

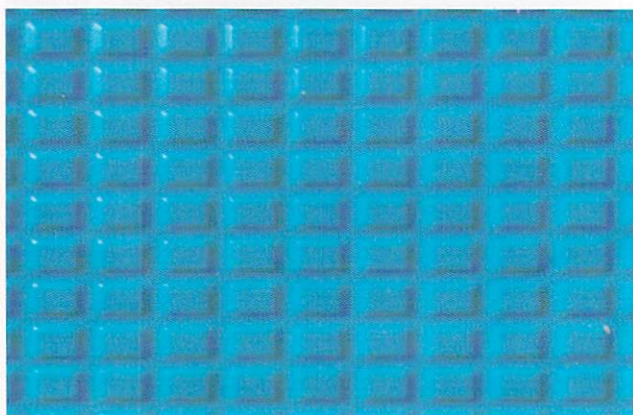






Figure 3: Using LightWave 3.1's new Displacement mapping feature, smoothly shaded patterns ideal for background textures are a snap. After creating a greyscale image in DPaint (A-Top), use Modeler to make a tripled and heavily subdivided plane with the Box tool (B-Below A). In Layout, resize the plane to fill the screen (C-Below B) and load the image you created in DPaint. Use this image as a Displacement map on the plane object, adjusting the Texture Size for tiling (D-Bottom). Add color, specularity and smoothing to the Surface and render the result (E-Left).

After a while, you should now have your first background gas image in the bag (Figure 1B). Because gases take a relatively long time to render, even on an '040, consider lowering the Samples/Pix parameter in the Gas Object Control panel. There will be less detail to the gas, but will render much faster. For a variation, experiment with the Turbulence parameters, or for a more subtle backdrop, consider importing this image into an image processor, cropping out a small portion of interest and scaling that section to full screen size (Figure 1C). See AC Volume 8, No. 7, July 1993, p.43, "Exploring Remap: A DCTV Tutorial" for further discussion of this technique.

## Scanning For Image Maps

In 3D modeling and animation, image maps (or textures in desktop publishing parlance) are responsible for adding realistic surface qualities to otherwise sterile, lifeless models. These photographic textures can either be purchased commercially or, as we shall see, created "in-house." As texture maps, these images can be used in a variety of mapping schemes — displacement, clip, transparency, luminosity, bump, diffusion, specular, reflection and color. Reflection mapping an object, for example, is particularly

---

These photographic textures  
can either be purchased  
commercially or, as we shall see,  
created "in-house."

---

useful for creating metallic-like or reflective surfaces. Because a reflective surface inherently lacks any immediately visible qualities, reflection maps provide the object with environmental clues to simulate true reflection. [Author's Note: This topic will be covered extensively in future columns.]

For example, flying logos are often seen with glints of light beams travelling across its shiny, metallic surface. What gives the surface away as being metallic are the apparent reflections of the object's immediate surroundings. Reflection mapping accomplishes this by pasting the desired image, or reflection map, onto the inside of a virtual sphere surrounding the entire 3D universe. Thus, the content of an image to be used in this manner is very important. For the glints of light effect described above, white diagonals drawn over a black background are usually considered. Otherwise, a nice fractal noise-like pattern does very well for simulating non-distinct surroundings.

With a flatbed scanner or video camera for digitizing, creating a versatile reflection map for your 3D objects is a breeze. Simply scan or digitize a piece of aluminum foil in various stages of disfigurement (Figure 2A) and save the resulting images for later use as reflection maps. As Figure 2B illustrates, the undulating patterns of light and dark from the reflection map seen on the surface of the logos aid in the illusion that the surface has reflective properties; when in fact no actual ray-tracing whatsoever is being done. Ultimately, if reflection mapping is an option over ray-tracing



**LOOK!**  
AMIGA COMPATIBLE  
MITSUBISHI COLOR  
MONITORS



**Diamond Scan 20C \$795.00**

CRT Size: 20"/19" View  
Resolution: 1024 x 768 I  
800 x 600 NI  
Scan Frequency: 15.7-38kHz H  
50-90Hz V  
Control Panel: Digital

**Diamond Scan 20A \$695.00**

CRT Size: 20"/19" View  
Resolution: 1024 x 768 I  
800 x 600 NI  
Scan Frequency: 15.7-38kHz H  
45-80Hz V  
Control Panel: Analog

**30 DAY MONEY BACK GUARANTEE**  
**OTHER PRODUCTS AVAILABLE**  
**LIMITED QUANTITY**  
**CALL TODAY!**

The Video Works

VISA MasterCard

25 Beta Ct # N, San Ramon, CA 94583 / Phone: 800-838-1031 / Fax: 510-838-0689

Circle 110 on Reader Service card.

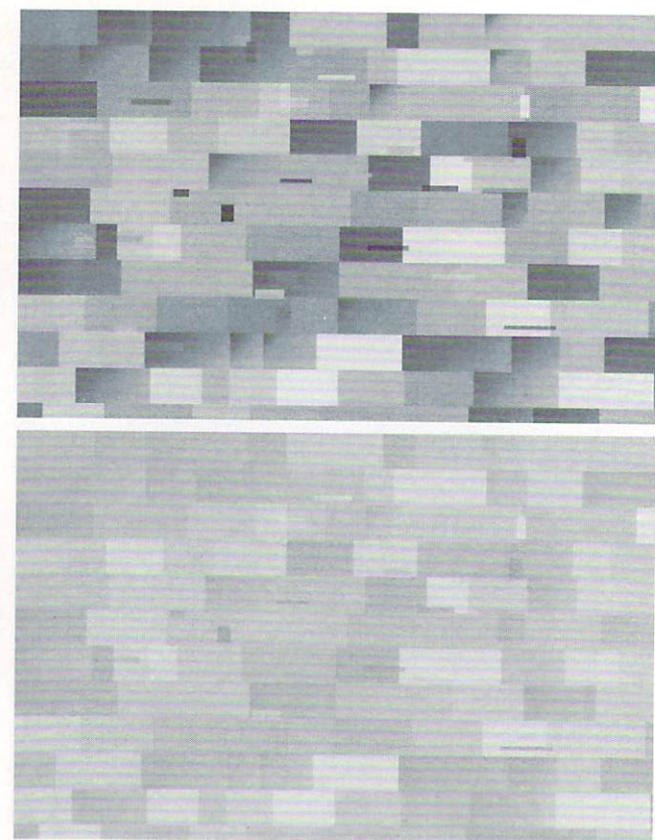
take it. You'll save a considerable amount of time when rendering multiple frames in an animation. Incidentally, this is a LightWave created image. Let's now turn to LightWave and DPaint to create a more mechanically-looking background image.

### More Background Images Using LightWave And DeluxePaint

I must say that LightWave is undoubtedly THE most powerful 3D software available for the Amiga, and possibly, dare I say it, for any platform (save for SG platform of course). Of the many features new to Version 3.1, the ability to displacement map an object is extremely valuable, allowing one to create/alter objects that would be very difficult to do with traditional modeling methods. Displacement mapping works by actually displacing, or shifting, an object's points, and hence polygons, a distance determined by the pixel value of an associated greyscale image. Brighter pixels have a greater effect on the object, darker ones leave the area undisturbed. With that in mind, we'll use DPaint to create an image which will then be used as the displacement map for a plane of polygons in LightWave.

Enter DPaint in a 16-color, HiRes mode and arrange a greyscale palette. Set up a Range from white to black with the greys in-between. Now using a series of four alternating horizontal and vertical Fill Types with the greyscale range you just created, draw out the sides of a beveled tile with the Filled Polygon tool as shown in Figure 3A. Complete the tile with a solid white rectangle over the middle. Save this image as **BevelTile**.

Enter Modeler and 2D plane in the Face view using the Box tool with as many X and Y segments as memory will allow. I used



100 x 100. Triple these polygons and then Export this object to LightWave as **Plane** (Figure 3B).

Enter LightWave and resize the **Plane** so that its edges fill the entire screen and just beyond (Figure 3C). Create a keyframe for this object. From the Images menu, load in the **BevelTile** image that you created in DPaint. Now access the Objects menu and use this image as a planar Displacement Map on the Z-axis, setting the Texture Size to .1 and .1 on the X and Y axis, respectively (Figure 3D). This effectively tiles the image over the plane in a 10x10 configuration. Depending on how many polygons you were able to subdivide the plane into, you may need to alter the Texture Size for more or less tiles. In other words, the more polygons are in the object, the finer the detail becomes when those polygons are displaced.

Now in the Surface menu, change the object's color to your liking, add 25% Specularity, and turn on Smoothing. In the Camera menu, arrange your desired preferences for rendering. Leave everything else in the scene at its default and render the image. You should shortly have a nice, beveled tile background (Figure 3E). If desired, adjust the Lighting angle for more or less shading and highlights. See how versatile displacement mapping can be? If you wish, you can save this scene as a template for making background textures and each time simply change the image to be used as the displacement map. Let your imagination take over.

### ADPro, ARexx, and Hull Panels

Another way of adding surface detail to 3D objects is through diffusion and specular mapping. Similar to displacement mapping, these surfacing techniques again use the luminance



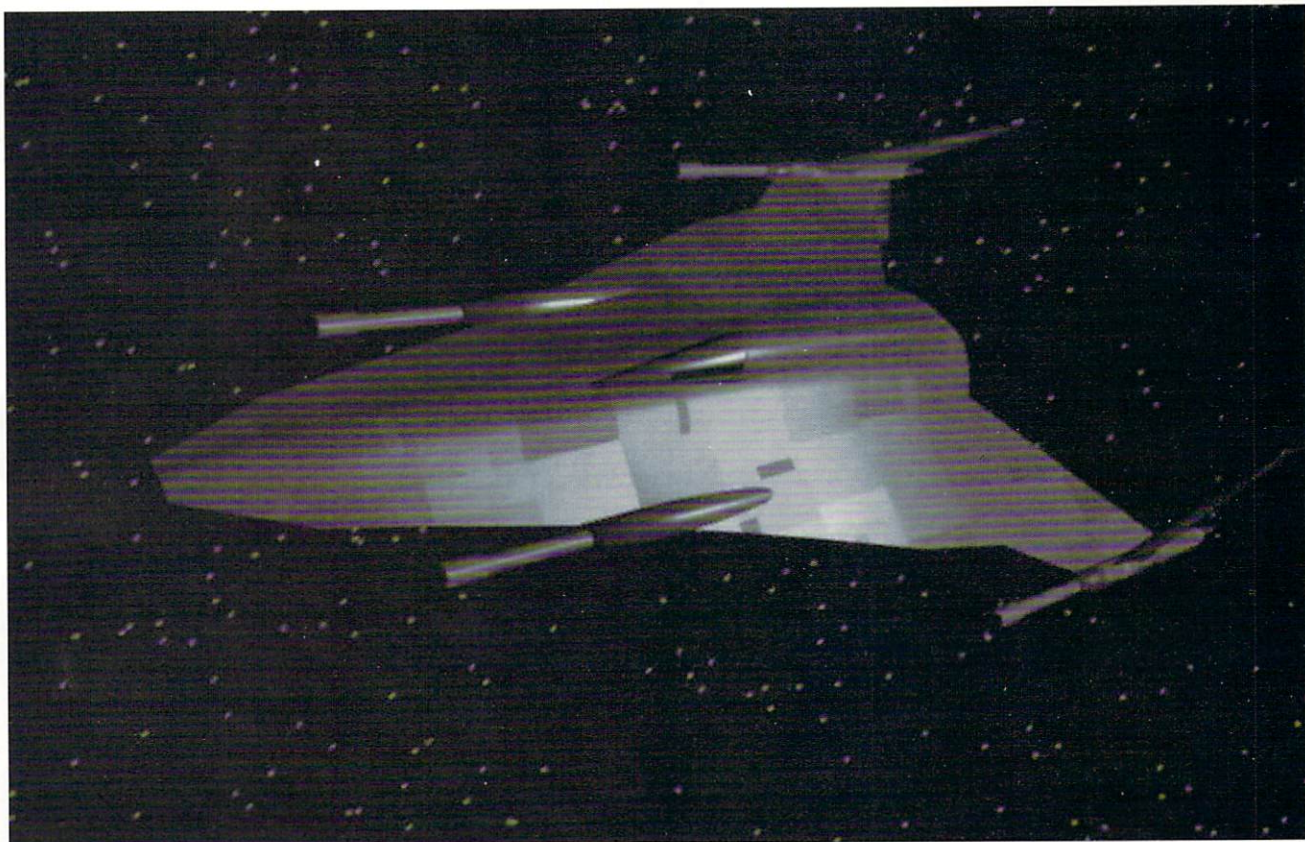


Figure 4: With the help of ARexx and ADPro, the included macro `_HullPanels.adpro` produced a greyscale image to be used as a Specular (A-Top Left) and Diffuse (B-Bottom Left) texture map for a spaceship's hull surface in LightWave 3D (C-Above).

variations of an image map to modulate the diffuse and specular levels of an object's surface properties. Diffuse maps determine what areas of the object's surface absorb or scatter received light. Higher diffusion values, in this case lighter areas of the image map, will scatter light more effectively, thus giving the object the appearance of being more fully lit. Specular maps are used to alter the surface's apparent hardness, indicated by the amount and degree of the surface highlights. Again, high specular levels produce a harder surface like metal or plastic.

As listed at the end of this article, I've written a basic ARexx macro for ADPro to automatically create an image exemplifying a typical texture to be used as a diffuse and specular map for the hull of a ship. This image of randomly placed greyscale panels would then be used as a diffusion map to modulate the shading of an object's surface color with the luminance variations of the map. The advantage here is that if you wanted to change the color of the entire object, you would simply change the Surface Color value without having to recolor each panel in the image map. Similarly, this same image could then be used as a specular map to modulate regions of hardness, hence specular highlighting, of the object's surface. This would break up the light reflections for more convincing surface properties (Figure 4C). Thanks Mojo.

Using ARexx on a A2000 equipped with a GVP '040 accelerator, I was able to create a 752x480 panel textured image map with `_HullPanels.adpro` in under 42 seconds (Figure 4A). I can only imagine how long this would have taken by hand. For further realism however, I would supplement this image with additional custom blemishing like exhaust or burn marks in another 24-bit paint program like ImageFX or OpalPaint. Using this ARexx macro

merely provides a nice base image of random panels to start things off. Again, I've commented the code fairly well so you can figure out what's going on. However, I did run into one problem...

#### A Word About ADPro's BackDrop/BackLine ARexx Implementation

It doesn't work. At least, as of this writing, not correctly. When I attempted to throw in some gradient panels for variety, the ARexx implementation for ADPro's gradient BackDrop and Backline loaders wouldn't accept the gray values, or in Backline's case, the directional orientation either (only the NW and NE parameter actually worked). The values that were used came from the configuration file that was saved when ADPro was last used manually. I haven't yet called Tech Support on this matter so there is still hope. I will definitely try to refine this macro for more and better random detail, but to do so it will need conversion to one of the more versatile image processors with regionalized painting like ImageFX and OpalPaint. Don't hesitate to play around with the parameters to see what you can come up with though.

#### Epilogue

As you can see, with the appropriate software there are numerous ways at your disposal for creating various background images and texture maps in a pinch, especially for those on a budget. Stay tuned next month when we'll begin our journey into the world of 3D modeling and animation.





# Listings

```

/*
** _HullPanels.adpro
**
** $VER: _HullPanels.adpro 1.1 (July 1,1994)
**
**
** DESCRIPTION:
** This ADPro macro creates a greyscale bitmap of various-
** sized rectangles to be used as a ship hull image/texture
** map (ie. color, diffusion, specularly) in most 3D
** modelling and animation software such as LightWave,
** Aladdin4D, and Imagine.
**
** REQUIREMENTS:
** None this time!
**
** NOTE:
** For convenience, I put all MY macros in the "Commands2"
** subdirectory and prepend them with an underscore "_" so
** that they will show up in the "User Commands" window of
** the ADPro interface and the underscore flags them as
** being written by me.
**
** CREDITS:
** William Frawley (some portions adapted from ASDG macros)
**
*****
OPTIONS RESULTS

ADDRESS "ADPro"

/*
** Definitions
**/

NL = '0A'X /* Shorthand Hex representation of a LineFeed */
TRUE = 1
FALSE = 0
TempDefaults = "T:TempADProDefaults"

/*
** Save the current environment.
**/

SAVE_DEFAULTS TempDefaults

/*
** Ask User For Seed # For Random Number Generator
**/

GetNumber "Enter Seed # ..." 1 1 999
IF (RC == 0) THEN DO
  ADPRO_TO_FRONT
  OKAY1 "Sorry, No # Entered!"
  CALL ErrorOut 10
  END
Seed=ADPRO_RESULT

/*
** Ask User For Image Dimensions
**/

GetNumber "Enter WIDTH of image" 752 50 16383
IF (RC == 0) THEN DO
  ADPRO_TO_FRONT
  OKAY1 "Sorry, No # Entered!"
  CALL ErrorOut 10
  END
W=ADPRO_RESULT

GetNumber "Enter HEIGHT of image" 480 50 16383
IF (RC == 0) THEN DO
  ADPRO_TO_FRONT
  OKAY1 "Sorry, No # Entered!"
  CALL ErrorOut 10
  END
H=ADPRO_RESULT

```

```

/*
** INITIALIZE VARIABLES. Since we're starting with a dark
** grey background, the subsequent panels added will be
** solid white or a gradient with a variable Mix value
** resulting in panels ranging from very light grey to the
** initial background color.
**/

MinMix=1 /* 1% White panel+99% BaseValue */
MaxMix=75 /* 75% White panel + 25% BaseValue */
LowH=H%20 /* Minimum Panel height is 5% of Image height */
HighH=H%8 /* Maximum Panel height is 12.5% of Image hgt */

/* This next line randomly determines the uniform height
** of all panels, ranging from 1/10 to 1/4 of the height
** of the entire image map.
**/
PanelH=RANDOM(LowH,HighH,Seed)

OffsetX=0 /* Top-Left offsets for panel placement */
OffsetY=0
BaseV=150 /* Grey value for initial background map */
/* Alternatively, use RANDOM(1,150,Seed) */

FillV=255 /* Color Value (White) of each Backdrop panel */
/* composited over the initial background map */

MaxD=W%100 /* Random # of detail elements max 1% of W */
DOffsetX=1 /* Top-Left origin for detail panel placement */
DMix=100 /* Mix all detail panels at 100% for contrast */

/*
** Create Background
**/

Loader "BACKDROP" "Dummy" W H GRAY FILL BaseV BaseV BaseV

IF (RC == 0) THEN DO
  ADPRO_TO_FRONT
  OKAY1 "Sorry, BACKDROP Loader Failed!"
  CALL ErrorOut 10
  END

/*
** Create Panels
**/

DO WHILE OffsetY<H /* Process until reach bottom H */

  DO WHILE OffsetX<W /* Process until reach right side W */

    PanelW=RANDOM(W%50,W%10,Seed) /* Between 2-10% of W */
    Mix=RANDOM(MinMix,MaxMix,Seed) /* Composite % */
    CALL Fill /* Uncomment the following when bug fixed */

    /* As of yet, I still cannot get the AREXX version of
    ** BACKDROP gradient and BACKLINE to work correctly.

    Type=RANDOM(1,4,Seed)
    IF Type<=2 THEN CALL Fill
    IF Type=3 THEN CALL BackLine
    ELSE CALL Gradient

    **
    **/

    OffsetX=OffsetX+PanelW /* Draw next Panel here */
    END /* End DO OffsetX */

    Seed=RANDOM(1,999,Seed) /* Reset Seed # for next row */
    OffsetX=0 /* Reset left start panel position */
    OffsetY=OffsetY+PanelH /* Start next row here */
    END /* End DO OffsetY */

  OffsetY=0 /* Reset for detail panel loop */

/*
** Create Detail
**/

DO WHILE OffsetY<H /* Process until reach bottom H */

  DTotal=RANDOM(1,MaxD,Seed)

  DO i=1 TO DTotal

    DOffsetX=RANDOM(DOffsetX,DOffsetX+W%DTotal,Seed)
    DOffsetY=RANDOM(DOffsetY+1,OffsetY+PanelH,Seed)
    DWidth=RANDOM(5,W%20,Seed) /* 5 pixels - 5% W */
    DHeight=RANDOM(5,PanelH%2,Seed)
    DValue=RANDOM(1,255,Seed)

```



```

Operator "RECTANGLE" OffsetX OffsetY DWidth DHeight ,
    "-1" DValue DValue DValue DMix

IF (RC == 0) THEN ITERATE

OffsetX=W%DTotal*i          /* Next placement here */

Seed=RANDOM(1,999,Seed) /* Reset Seed # for next pass */

END

OffsetX=1 /* Reset horiz offset to lefthand side */
OffsetY=OffsetY+PanelH /* Start next row here */
Seed=RANDOM(1,999,Seed) /* Reset Seed # for next pass */

END

/*
** Exit
*/

Okay! "Finished!"
CALL ErrorOut 0

/*****
/* INTERNAL FUNCTIONS */
*****/

ErrorOut:

    PARSE ARG ExitCode

    IF (EXISTS( TempDefaults )) THEN DO
        LOAD_DEFAULTS TempDefaults
        IF (RC == 0) THEN DO
            ADPRO_TO_FRONT
            OKAY! "Error restoring settings."
            END
        ADDRESS COMMAND "Delete >NIL:" TempDefaults
        END
    EXIT ExitCode

Fill:

    Loader "BACKDROP" "Dummy" PanelW PanelH GRAY FillV FillV,
        FillV COMPOFFSET OffsetX OffsetY COMPMIX Mix

    IF (RC == 0) THEN DO
        ADPRO_TO_FRONT
        OKAY! "Sorry, BACKDROP Loader Failed!"
        CALL ErrorOut 10
        END
    RETURN

Gradient:

    a=RANDOM(1,255,Seed)
    b=RANDOM(1,255,Seed)
    c=RANDOM(1,255,Seed)
    d=RANDOM(1,255,Seed)

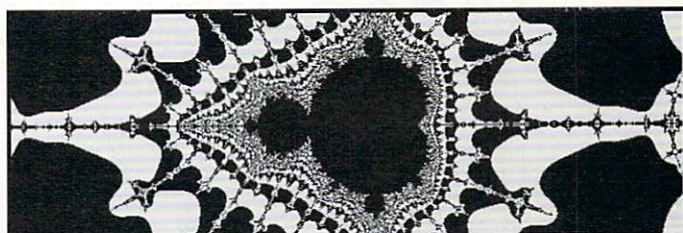
    Loader "BACKDROP" "Dummy" PanelW PanelH GRAY "UL" a a a "UR" b b b,
        "LL" c c c "LR" d d d COMPOFFSET OffsetX OffsetY COMPMIX 100

    IF (RC == 0) THEN DO
        ADPRO_TO_FRONT
        OKAY! "Sorry, Gradient BACKDROP Loader Failed!"
        CALL ErrorOut 10
        END
    RETURN

BackLine:

    Pos=RANDOM(1,100,Seed) /* Middle color position */
    a=0 /* 3 components of backline */
    b=RANDOM(1,255,Seed) /* greyscale values */
    c=255

```



**NEW** one hour instructional video  
by D. L. Richardson  
**FRACTAL FREEDOM** . . \$35

Also available  
**ANIMATION 101** . . . . . \$25  
Or get both for only . . . \$50

**MYRIAD VISUAL ADVENTURES**  
1219 N.W. 79th Street  
Oklahoma City, OK 73114



Circle 115 on Reader Service card.

Loader "BACKLINE" "Dummy" PanelW PanelH GRAY Pos "N",  
GRAYVALS a b c COMPOFFSET OffsetX OffsetY COMPMIX 100

```

IF (RC == 0) THEN DO
    ADPRO_TO_FRONT
    OKAY! "Sorry, BACKLINE Loader Failed!"
    CALL ErrorOut 10
    END
RETURN

```

RETURN

•AC•

Please Write to:  
William Frawley  
c/o Amazing Computing  
P.O. Box 2140  
Fall River, MA 02722-2140



# Video Transitions using ARexx

by Jason R. Hardy

Writing a script may seem like an imposing task at first, but if it is broken down into a few concise sections the task becomes much easier.

Art Department Professional is a powerful tool for professional Amiga users. It is not a toy, yet can be enjoyable to use. ASDG included a large number of interesting effects, but no easy way to use most of them in an animation. FRED is great for simpler tasks, such as combining a large number of frames into an animation, however; when it comes to creating brand new animations, it can be difficult to achieve the desired results even with the included tutorials and scripts.

The best way to get all the power out of most of the operators is to write an ARexx script to control them or use one of the programs now available to help automate the writing process. After all, who would want to perform an operation manually on a 500-frame animation? But contrary to what a large number of people may think, writing and designing an ARexx script is easier than neurosurgery.

The purpose of this article is not to teach the ARexx basics, but rather to help someone who uses ADPro and would never consider using ARexx for anything. Writing a script may seem like an imposing task at first, but if it is broken down into a few concise sections the task becomes much easier.

To simplify the task, it is useful to divide the writing process into three areas: the idea, or what you want the script to accomplish; the theory, or which operators in combination can be used to give the desired effect; and the actual writing of the script.

Getting an idea can be the hardest of the three steps - after all, the effect being produced should be both effective and visually pleasing. One way to get inspired is to watch a T.V. channel which may have a fair number of visual effects, such as a home shopping channel or a pay-per-view advertisement channel.

Once you have an idea, you must decide how to implement it. Unfortunately, there are few shortcuts. However, if you have even a vague impression of how to accomplish the effect, you should go into ADPro and try out a few scenarios to manually approximate your theories. This will help you decide what works or at least what doesn't work. Often, it is quite helpful if you draw the effect on a piece of paper and then work from the drawing instead of from memory.

Finally, we have come to the implementation of the theory. If you have never used ARexx before, I would suggest that you look through the scripts which come with ADPro. They can provide a wealth of information about how to write your own ARexx script.

However, in order to get an idea, you must be aware of the capabilities of the program. Therefore, a few examples of ADPro effects will be provided to help you get some ideas.

## Compositing

ADPro not only provides operators to manipulate individual images, but also gives the user the ability to composite two images together. In all of the examples, compositing is the basis for the transitions. We will start with the simplest transition - the fade. All

that is involved is changing the "fade factor" in each frame. To see how this is accomplished, take a look at Script #1.

The roll operator may seem like a fairly simple operator with little use by itself, but it does have some definite uses—especially in transitions between two screens. For example, one transition that can be created using only roll would be a "push" style transition, where it appears that one image is pushing the other off the screen. To accomplish this, use Script #2, which uses the principles from the first script with the roll operator.

Of course, compositing can be used in many other ways. In fact, if you do a "two-step" composition, virtually any effect can be achieved. A "two-step" composition refers to using an intermediary image, generally consisting of two colors. For our example, black and white will be used. Imagine that there is a white circle in the middle of a black background. This new picture should be the same size as the other two images.

To start the effect, load the first image. Then load the intermediary image using compositing and allow the transparent color to be white. If you were to view the picture now, there should be a circle in the middle of the image which contains the center of the other image. The rest of the screen should be black. Now save this temporary image and load the second image. Finally, load the temporary image using compositing with a transparent color of black. If you were to view the resulting picture, there should be a circle with the center of the first image which is surrounded by the second image. This example is essentially the same as example four in the tutorial section of the ADPro manual, except that this example does not use the alpha channel option because some older versions of ADPro do not have it. It is important that you understand this example. It is the basis for the following examples.

## Animated Transitions

The use of the alpha channel gives an interesting effect, but is not terribly useful in its present form for animations. So, we must modify it so it will allow us to change the image sequentially. The first step is to create a new intermediary image; however, this one must be three times as long along the x axis (i.e., if the original images are 320x200, the intermediary one must be 960x200). Now, draw a pure white line on the intermediary image (this assumes that the intermediary image size is 960x200) from 320,199 to 639,0. Now fill in the region below the line with the same white. Then, be sure that the region to the right of the white triangle is also white all the way to the end of the image. This is done so that we may gradually change the picture by moving the intermediary image along the x axis when compositing it onto the first image.

To create this new animation, increment the x position of the intermediary image when it is being composited onto the first image. The parameters for the compositor in ARexx are as follows: `LOAD [filename] Xoffset Yoffset %composition transRed transGreen transBlue`. See Script #3 for the complete code. This



effect could also be done in FRED, but would probably require more work, and would not be as easy to tweak to get exactly what you want. This is a major benefit of ARexx scripts.

Of course, this script can be modified in many ways; for example, this transition could be performed vertically. Another interesting variation of this theme is using a multicolored intermediary image. To do this, create an image with dimensions of 740x200. The pixels from 0,0 to 419,199 should be black and the pixels from 420,0 to 739,199 should be white.

This image can be divided into three parts. The first part, from 0,0 to 319,199 should be entirely black and, when composited, will let the viewer see the entire first image. The second part, from 420,0 to 739,199 should be entirely white, to allow the second image to be seen. The third part, the middle, can contain anything you wish. For example, it could contain an eagle pulling the second picture over the first picture, or anything you desire. If you have a 24-bit paint program, the middle can be quite realistic.

You may even want to try using a digitized image. The only restriction is that the background of this middle section must be black if you wish it to be transparent. Another variant would be to use the roll operator in conjunction with compositing to give the impression that the first image is being pushed away by the second one. This variation is shown in Script #4.

The scripts provided with this article are relatively simple ones. ARexx scripts can be as complex as you desire, with very few limitations. The provided scripts should help in overcoming the initial hurdles in writing scripts if you are doing it manually, or, if you have one of the automation programs, by giving you new ideas on how to create new effects.

## Listings

### Script #1

```
/*
** A simple script that uses
** compositing to go from
** one image to another.
*/

ADDRESS "ADPro"
OPTIONS RESULTS

numframes = 30
fadefactor = 0
startimage = "Work:Pic1.IFF"
endimage = "Work:Pic2.IFF"
animname = "Work:TestAnim"

DO loop = 1 to numframes

/*
** Change the weight of the
** image to be composited.
*/

fadefactor=fadefactor+100/numframes

LFORMAT "IFF"
LOAD startimage

/*
** Add the second image to
** the first and remove decimals.
*/

truncFade = trunc(fadefactor)

LOAD endimage 0 0 truncFade

DITHER 1
RENDER_TYPE HAM
EXECUTE

SFORMAT "ANIM"
SAVE animname IMAGE APPEND
```

```
END

SFORMAT "ANIM"
SAVE animname IMAGE WRAPUP
```

### Script #2

```
/*
** A sample script using the
** roll operator to "push"
** one image off the screen.
*/

ADDRESS "ADPro"
OPTIONS RESULTS

numframes = 20

/*
** Generally zero.
*/

rightrollval = 0

/*
** Generally equal to the
** width of the images.
*/

leftrollval = 320
picwidth = 320

startimage = "Work:Pic1.IFF"
endimage = "Work:Pic2.IFF"
animname = "Work:TestAnim"
tempmic = "RAM:TempPic.IFF"

DO loop = 1 to numframes-1

/*
** Increment the roll amount
** for the two images and truncate
** any decimal value.
*/

rightrollval = rightrollval+picwidth/numframes
leftrollval = leftrollval+picwidth/numframes

truncRight = trunc(rightrollval)
truncLeft = trunc(leftrollval)

LFORMAT "IFF"
LOAD startimage

OPERATOR "ROLL" "RIGHT" truncRight NO_WRAP

/*
** Puts the first image into
** a buffer, where it is loaded
** later using the compositing
** option to add it to the second
** image.
*/

SFORMAT "IFF"
SAVE tempmic RAW

LOAD endimage
OPERATOR "ROLL" "LEFT" truncLeft NO_WRAP

LOAD tempmic 0 0 100 0 0 0

DITHER 1
RENDER_TYPE HAM
EXECUTE

SFORMAT "ANIM"
SAVE animname IMAGE APPEND
END

/*
** ADPro's ROLL operator will
** not allow an image to be rolled
** by the width of the image,
** therefore, the final image must
** be loaded separately.
*/

LOAD endimage

DITHER 1
RENDER_TYPE HAM
EXECUTE
```



```
SFORMAT "ANIM"
SAVE animname IMAGE APPEND
SAVE animname IMAGE WRAPUP
```

### Script #3

```
/*
** A script which uses a
** middle B&W image as a
** pattern for a transition.
*/

ADDRESS "ADPro"
OPTIONS RESULTS

numframes=20

/*
** Size of the intermediate image
*/

intermediateX = 960
imageX = 320 /* Picture size */

sizeX = intermediateX - imageX
whereX = 0 /* How much to roll */

startpic = "Work:Pic1.IFF"
endpic = "Work:Pic2.IFF"
intermediate = "Work:Background.IFF"
bufferfile = "RAM:TempPic.IFF" /* Temporary file */
animname = "Work:TestAnim"

DO loop = 1 to numframes
  LFORMAT "IFF"
  LOAD startpic

/*
** Loads and composites the
** "transition" screen, then
** saves it for later composition.
** Uses black as the transparent
** color so the first image is
** unchanged where black existed
** in the intermediate, but white
** was laid directly onto the
** original image.
*/

  roundX=trunc(whereX) /* Makes an integer */

  LOAD intermediate roundX 0 100 0 0 0

  SFORMAT "IFF"
  SAVE bufferfile RAW

  LOAD endpic

/*
** Composites the image
** saved earlier.
*/

  LOAD bufferfile 0 0 100 255 255 255

  RENDER_TYPE HAM
  EXECUTE

/*
** Changes the offset for
** the next frame.
*/

  whereX=whereX-sizeX/(numframes-1)

  SFORMAT "ANIM"
  SAVE animname IMAGE APPEND
END

SFORMAT "ANIM"
SAVE animname IMAGE WRAPUP
```

### Script #4

```
/*
** A script which uses a 24-bit
** intermediate image as a
** pattern for the transition.
*/
```

```
ADDRESS "ADPro"
OPTIONS RESULTS

numframes = 40

width = 320 /* Width of the image */
middle = 100 /* Width of the middle block */

sizeX = width + middle
whereX = 0 /* Generally zero */

startimage = "Work:Pic1.IFF"
endimage = "Work:Pic2.IFF"
intermediate = "Work:ColorBackground.IFF"
temppic = "RAM:TempPic.IFF" /* A buffer file */
animname = "Work:TestAnim"

DO loop = 1 to numframes

/*
** This changes the value required for
** rolling the first image to the left.
** If it is negative, ADPro does not roll.
*/

  roundX = trunc(whereX)

  rollvar = -roundX - middle

  LFORMAT "IFF"
  LOAD startimage

  OPERATOR "ROLL" "LEFT" rollvar NO_WRAP

/*
** Loads and composites the
** intermediate image onto the
** original, leaving the original
** untouched after the roll, but
** adds the middle image giving
** movement (i.e., biplane, logo).
** Also changes black portion of
** screen to white for later
** composition.
*/

  LOAD intermediate roundX 0 100 0 0 0

  SFORMAT "IFF"
  SAVE temppic RAW

  LOAD endimage

/*
** Changes value needed for moving
** the second image to the left
*/

  rollvar = sizeX + roundX
  OPERATOR "ROLL" "RIGHT" rollvar NO_WRAP

/*
** Loads and composites the first
** image onto the second one.
*/

  LOAD temppic 0 0 100 255 255 255

  DITHER 1
  RENDER_TYPE HAM
  EXECUTE

/*
** Change the offset of
** the next frame.
*/

  whereX=whereX-sizeX/(numframes-1)

  SFORMAT "ANIM"
  SAVE animname IMAGE APPEND
END

SFORMAT "ANIM"
SAVE animname IMAGE WRAPUP
```

•AC•

Please Write to:  
 Jason R. Hardy  
 c/o Amazing Computing  
 P.O. Box 2140  
 Fall River, MA 02722-2140



# Two for the Fun of It

by R. Shamms Mortier

## Having fun with BoomBox and Mand2000

Look, let's not kid ourselves. About twenty-five percent (maybe) of the reasons that people buy Amigas is to do the kind of professional applications with graphics, animation, and sound that the platform is capable of. The rest "just want to have fun" (to paraphrase a song by Cyndi Lauper). Being creative means exploration, and it turns out to be very personally empowering to engage in creativity of any kind, and it is indeed fun.

With that in mind, then, allow me to turn you on to two programs that will give you hours of enjoyment. Not that they aren't also capable of addressing some very professional possibilities, but let's forget that for the moment. Let me walk you through them so you can have one heck of a good time.

### BoomBox: Fun with Audio

This program is thrown in as a freebie by Dr. T's Software when you purchase their more major wares. BoomBox' documentation's cover page even says "Interactive Musical Fun", tipping you off as to its reason for existence. BoomBox is what it says, and its screen demonstrates that fact by bringing a big tape-player-like graphic into view. It's covered with gadgets, just like the real boomboxes carried around on the shoulders of

generation-X music boppers. The playful graphic interface hides the awesome power for creative enjoyment that the software reveals as you get used to its secrets.

The front of the graphic BoomBox has tape player controls just as you would expect: Play, Stop, Rewind, Fast Forward, and Record. Play brings up the music that you choose from a Load menu at the top of the screen. BoomBox comes with eight songs ready to play. Separate volume sliders for each of the Amigas four IFF sound channels are also available for interactive editing of the playback. A visual "tape counter" also displays where you're at as the song plays. But here's the real fun. There are six possible interactive real-time sound effects buttons as well, and a whole library of IFF sound samples that plug into these activators (you could also load in your own sounds here). Funky, funky,

funky! Grunts and moans, shouts and groans, riffs from horns and lots more. You can insert these sounds at any time over the music being played. It sounds so authentic, especially if played through a sound system, you feel like a studio engineer. Your whole interactive session can be recorded as you go, played back, and then saved as a separate song when you're satisfied.

Then there's the "ReMix" screen. This is where you can record your own mix, change the tempo, and add effects with the FX sliders. Current measures can be retriggered to play again or even lopped to play in a repetitive cycle. Small circular "solo pads" trigger six stored effects as well. A separate "Jam" screen is used for more creative interaction when recording. If you change the faders during a recording session, the playback will move the faders



Figure 1. The BoomBox Main Interface, ReMix, and Jam screens.



as you set them. There are keyboard equivalents throughout, and some are set to play various other effects on specific songs. Drum, Bass, and Synth patterns can be changed in real time by toggling graphic buttons in a special "Back Panel". The duration, repeatability, and pitch of effects is also under your control. In case you lose the manual or forget what you're doing, an interactive on-screen help menu is available.

The only negatives that I can imagine an Amiga boomboxer dwelling on might be the fact that this is obviously IBM-first software, as witnessed by the quantity and variety of IBM references in the manual. You are also limited to the music on-board, and cannot load in your own (nor is this MIDI compatible). Even with all of these facts, however, I still had a blast with the BoomBox.

### MAND2000: Fun with Fractals

If I were a gambling man, I'd bet a silver dollar that you will not be able to put this software down once you get into it. MAND2000 is to video what BoomBox is to audio, and it's great fun as well. The word "fun" is directly related to "redraw speed" in this case. If you've ever played with fractal image generators, you probably remember that the speed with which the screen redraws can either enhance or deflate your enjoyment. MAND2000 has the fastest redraws of complex Mandelbrot images that I have ever seen, and this speed allows you to experiment more. Exploration of a Mandelbrot image is accomplished by zooming in on areas of interest and

exploring deeper. You can even zoom in before an image is finished redrawing, which invites long sessions of exploration. If you get lost, you can even generate a picture of the "parent fractal" to see how far you've gone and how far you want to go. Everything about this program is super friendly and alluring.

Although there is what appears to be a limited number of fractals that can be loaded in from disk, "limitation" is not the name of this program. To access the full potential of the variables involved, you will need an AGA machine. That's because the real deal, 256 colors, is not available on an ordinary non-AGA Amiga. You will need 256 color displays, and you'll appreciate my reasoning, when you see these screens color cycle. If this software was available in the '60's, I doubt that half the population would have returned from Nirvana.

Let's look at some of the ways that you can manipulate a MAND2000 fractal graphic screen. To begin with, there's the exploration possible with a normal zoom in / zoom out feature, the increments of which can be set. Remember through all of this that redraw is very fast, even on non-AGA machines (less than 30 seconds in most cases). "Box Zoom" is another way to explore. With this feature, you control an area magnification box that's set to the aspect ratio of your resolution. Tiny areas can be looked at very quickly, and box zooms are possible even in the middle of screen redraws.

Another way of changing things is to alter the color palette, perhaps by creating new colors or new spreads of colors. This is

especially nice for making smooth color-cycling animations. You may also switch from Mandelbrot to Julia Set screens, and change the variables of the Julia Set "Seed Number" while you're at it (and watch the graphic change accordingly).

More? How about changing the Color Mapping of the screen, accomplished by choosing from four "types" (Repeated, Front Spread, Back Spread, Spread, Mono, and Filled Mono). The "Mono" settings are wonderful for getting black and white drawings to print or texture map with. Not to forget, the movement of the entire screen at any depth is always mouse-interactive. This means that you can interactively pan any graphic and watch as the screen redraws the new position quickly. The Colour Mapping window also has two sliders that effect the graphic: "Skip" and "Offset".

### The "P" word

I promised that I wouldn't use the word "professional" in this article, but since I've reached the end, I'm going to slightly break that promise. If you want to use these programs for professional videographic applications, they're both quite up to it. You can record hiphop sound tracks from BoomBox, and beautiful fractal video from MAND2000. All you need in both cases is the right recording equipment. In fact, why not record some cycling Mandelbrot animations with a BoomBox soundtrack. Now that would be both fun and exquisite! ENJOY! See you in ROMulan space...

•AC•

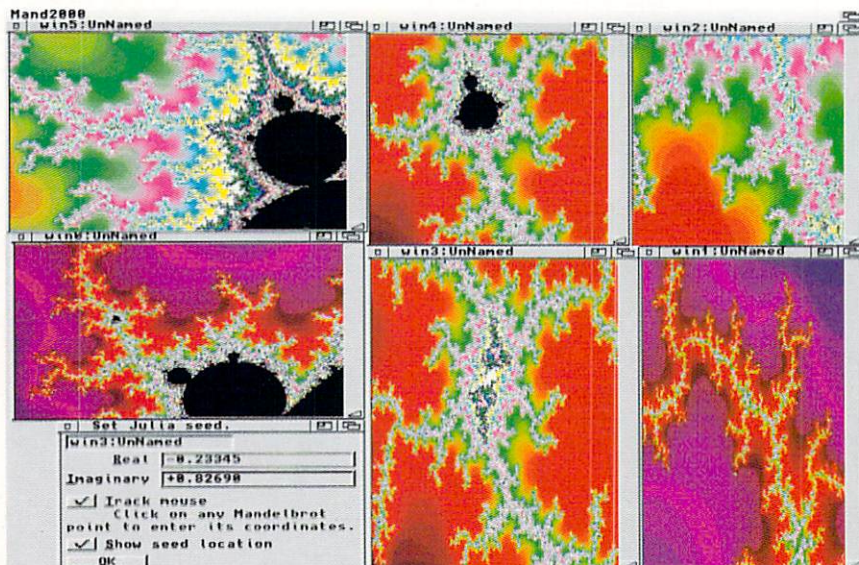


Figure 2. You can open as many separate MAND2000 screens as memory will allow, and they can all be in Hi-Res as well. Not only that, but they can all color cycle at the same time.

BoomBox  
MSLP: \$49.95  
Dr. T's Music Software  
124 Crescent Road, Suite 3  
Needham, Mass 02194  
(617) 455-1454  
Inquiry #209

MAND2000  
MSLP: \$49.95  
Cygnus Software  
33 University Square, #199  
Madison, WI 53715  
Inquiry #210





# Roomers

by The Bandito

## Alternative Platforms, and Other Things Amiga Users Should Avoid.

*[These statements and projections presented in "Roomers" are rumors in the purest sense. The bits of information are gathered by a third-party source from whispers inside the industry. At press time, these rumors remain unconfirmed and are printed for entertainment value only. Accordingly, the staff and associates of Amazing Computing cannot be held responsible for the reports made in this column.]*

### Third-Party Developers: Caught In The Wake

Commodore's demise has sent several third-party developers into rough financial waters. Various hardware manufacturers have had sizable layoffs of personnel, as it became clear that Amigas were not going to be returning soon to retail stores and sales of peripheral hardware dropped accordingly. How can you tell the financial impact of their losses? Check out the advertisements in the magazines — or rather, those ads that used to be there. Some of the major advertisers who used to buy many pages have reduced or eliminated their ad buys. That's usually a sign that they just don't have the money to place the ads.

Worse still, development of new hardware has been slowed, if not halted at some places. While there's still a large installed base of Amiga owners to cater to, many hardware companies depend on a large chunk of new users for sales on many of their items. With new Amiga users an

endangered species right now, hardware sales have fallen. Thus spending on new projects has been reviewed, and in many cases cut back. We can still expect to see high-profile projects like 68060 accelerator cards, though, since there's likely to be a good demand for such items. Even with those prospects, though, hardware makers are struggling, and many are looking to other platforms for future sales.

The software makers aren't in any better shape, generally. Those that are left alive are accelerating their development efforts on other platforms. Look at ASDG; they've even changed their name to Elastic Reality Inc., to reflect their new focus on the product of the same name for the Macintosh and SGI. Oh, we can expect some new versions of Amiga software for a while from most of the big companies, but count yourself lucky if there's more than one major new upgrade for any Amiga software package. Several prominent Amiga developers have committed to continued support for their products, though, and that's good news. The best way to look at the situation is that those Amiga developers who are still around have weathered some very tough times, and they're not about to wander off now. These companies will be as loyal to the Amiga fans as the Amiga fans have been to them, which is considerable.

And what about mail-order firms? There are some nasty tales floating around about how some places will cheerfully take

your order, claiming the product is in stock, and even charge your credit card for it. Then you wait, and wait, and wait...

How can you avoid being trapped by a company like this? First of all, deal with someone you know, when possible. If you've had good service in the past, likely you'll get it in the future from the same company. Get recommendations from friends, people at user groups, or from the vast electronic community of Amiga fans. In any case, be sure you follow up on your order. Only order through a credit card, because that way you have more leverage (you can stop payment or even get a refund from the credit card company if you think you're being jerked around; check with your card provider for their policies on this). Make sure you get the name of the person who takes your order, and you should make a record of all your calls to the company. Get a projected delivery date when you order, and then if it doesn't come, call and find out where it is. Don't ignore it and hope it'll come soon.

The worst cases of mail-order problems have been with people ordering entire Amiga systems, whose purchases run to thousands of dollars. You can bet they're upset when they get charged for the order but have no computer to show for it. Sure, sure, the supply of Amigas is vanishing to none these days. But there's no excuse for charging a credit card if you don't even have the product in stock. Watch out, villains — The Bandito Knows!



## AMIGA REPAIR SERVICES

**\*\* 24 HOUR TURNAROUND \*\***

A 1 year warranty • Factory Trained Technicians  
and the lowest prices in the USA

**A2000 CALL\* A500 CALL\***  
FACTORY AUTHORIZED SERVICE CENTER

For A1000, A3000 And Monitors call

• Amiga 1200 • GVP A1230 •  
Turbo MBX1200 •

Lowest Prices in the USA Call

Get on our mailing list. You will receive our free news letter with service tips and great deals on hardware and accessories. Send us your name and address or circle the reader service number

**1-800 967 1073**

**J & C Repair**  
RD 2 BOX 9 Rockton Pa. 15856

PA Residents add 6% \*call for details

Circle 165 on Reader Service card.

## The Context Bible

**Fast - Concordance.** Every word indexed. AND, OR, NOT, XOR. Outputs with or without text to screen, file, or printer. 512K RAM. NIV.

**Flexible - Hypertext.** Add virtually unlimited notes, marking, instant-jump cross references. NIV, KJV. Plus commentaries. 1 M RAM. Includes Thinker hypertext/outline-word processor/database program. Write sermons, commentaries, or a reference Bible.

Call/write for free Demo disk and brochure.  
Unlimited 800# support.  
2 year money-back guarantee.

**Neuralink** (800)657-8822  
P.O. Box 16311, Lubbock, TX 79490 USA

Circle 106 on Reader Service card.

## The ARExx COOKBOOK

by Merrill Callaway

Your complete ARExx tutorial. **Guaranteed to make learning ARExx easy.** With ARExx you can bring out the true power of your Amiga whether you are batch processing animations, doing DTP, or just about anything else! Customize your system and your application programs. Isn't it about time *you* had some ARExx Support?

★ *The ARExx Cookbook Deluxe Set* comes with two full disks of useful examples that you can study or simply plug in and go.

★ *The ARExx Reference Disk* - a super-detailed ARExx manual in Amigaguide format. Deluxe Set \$54.90; Reference \$24.95 post paid

★ **Both for \$63.95 ★ SAVE \$15.90!**

WHITESTONE

511-A Girard SE, Albuquerque, NM 87106  
(505) 268-0678 Visa/MasterCard accepted.

Circle 148 on Reader Service card.

## Where Do You Go When You Jump Ship?

Yes, some Amiga loyalists are departing for other electronics, unable to bear the suspense of waiting to see what happens to the Amiga. Now, we mustn't blame them for being skeptical; the Amiga has a very tough course ahead of it, and the odds of the Amiga becoming a measurable part of the computer market again are long. So, in the spirit of the friendly, open Amiga architecture, let's give our departing friends some guidance as they venture off into deep waters.

If what you're looking for is video games, the true inheritor of the Amiga technology is 3DO. After all, it was designed by RJ Mical and Dave Needle, two of the original Amiga guys. Yes, it's had a slow start, but things seem to be picking up for it now. There are nearly a hundred titles on the market, and some of them are pretty cool. The price is due to take a big drop for this Christmas, too, from what the Bandito hears. And they're already working on 3DO II, which will go head-to-head with the 64-bit systems on the drawing boards from Sony, Sega and Nintendo.

If you're looking for more mature games (in general) along with some added computing capabilities, try a so-called "multimedia" PC with a CD-ROM drive. If you like having a lot of titles available, this one's for you. You'll even be able to buy a 3DO add-in card later this year. But be prepared for a nightmarish experience in setup and installation of every piece of hardware and software.

Yes, PCs are where the games are, but the words "ease of use" are unknown. You've got to become an expert to have any chance of getting a remotely usable system, or instead have an expert set one up for you and handle every little problem you have (which will be legion). First of all, make sure you get an accelerated video graphics board, it has to handle both DOS and Windows (some cards only handle one, but not the other, GO figure). Oh, yes, and you have to have drivers for every little piece of software if you want them to take advantage of your card, so check to make sure the right drivers are available.

As for the operating system, run OS/2 if you want a more Amiga-like OS experience, but make sure you have at least 16 megabytes of RAM and the fastest PC you can get your hands on (figure a 50 MHz 486 at a minimum), because OS/2 is sloo-oow. And don't forget your 16 bit sound card and double-speed CD-ROM drive. Make sure they go together, because

different CD-ROM drives have different interfaces, as do different sound cards, and if you buy at random odds are the CD-ROM won't plug into the sound card. That's what's known as Plug and Pray, in PC lingo. Mention autoconfig to a PC user and you'll get a blank stare in return.

Unless you want to get a splitting headache, buy a preconfigured system from a dealer or a big company. If your time is worth anything at all, it's worth paying extra to have someone set up your system for you. If you really want the experience of configuring a PC system with multiple components from different manufacturers under both DOS and Windows, here's the Bandito's advice: get a job as an air traffic controller. It's far more predictable and much less stressful.

For general business use, Windows on a PC is the standard. Maybe Chicago will be better; it can't be any worse. At least you'll have a good selection of business software to choose from, even though you'll be shocked at how much RAM and disk space these programs eat up. Oh, yes, you really should figure on at least 400 megabytes of hard drive space, since the average Windoze program these days takes up about 30 or 40 megabytes of disk space. You want a hard drive bigger than 500 megabytes? It is to laugh, because IDE doesn't support that. You'll have to get a SCSI interface card and a SCSI drive.

For multimedia or video, get a Power Macintosh (try next year's models with the PCI bus for optimum performance). The new PowerMacs are very powerful for a good price. Sure, their animation ability still bites, but it's better than a PC. The software tools are the best you'll find outside of the Amiga market, though be prepared for some sticker shock. You'll have the advantage of easy networking. You'll long for the CLI and true multitasking, though, when you want to get things done. Try to get the new System 7.5; it has some nice features to it.

## What To Do When Your Amiga Throws A Chip

What should Amiga owners do if their system goes south? One of the great concerns during these days of dead Commodore is what you do when your Amiga breaks. Spare parts will get increasingly scarce, of course, until and unless production resumes. Some Amiga parts are standard electronic components, but if a custom chip dies, are you out of luck? Well, not necessarily. SMG, the company that took over Commodore



warranty service, is still performing repairs on Amigas, according to reports. And they were clever enough to stockpile a lot of Amiga parts, so they'll be able to continue fixing Amigas for quite some time even if production never gets rolling again. At least, that's the story. The Bandito has heard several horrific tales of Amigas trapped in retail stores or mysteriously "in transit" while awaiting warranty repairs that never seem to happen. We can only hope that this situation will improve if and when Amiga production begins again.

### Men (and Women) Overboard!

In case you're wondering what's happened to some of the people from Commodore, the Bandito has done a little checking on this. Most former Commodore employees are finding good jobs elsewhere. Scala has hired many of the best; they've gotten the cream of the hardware and software engineers, by all accounts.

As for the marketing and sales folks, well, those people can get a job anywhere, even though they may not want to mention their last employer as a reference. How good do you think it would look having "Commodore Marketing" on your resume? Still, the Bandito hears that most have found good positions elsewhere.

What will happen to the former head honchos of Commodore, Irving Gould and Mehdi Ali? Well, Irving can just retire. Even if he loses anything in the breakup of Commodore (aside from now-worthless stock which was never money in the first place), you need not pity him. He's worth many tens of millions.

Mehdi is certainly a multi-millionaire after pulling down \$2 to \$3 million per year for quite a few years, so he's not going to starve. Let's just hope no other computer company will hire him. Here's a suggestion for any technical firm that wants to hire Mehdi: ask him to format a floppy disk, on any type of computer. Sit back and watch the fun!

### Reading The Entrails

Replay hazy, ask again later. That's about the story from even the most inside of the insiders these days. As of this writing, the trustees still have not made a decision as to the winning bidder for the remains of Commodore and the Amiga technology. This is not an encouraging sign; it means that no one has walked up and made a compelling bid. According to what the Bandito hears, the trustees were disappointed by the first round of bids, and called for a second round. Those were even

lower. Seems like the trustees had some unrealistic expectations of what companies were willing to pay for Commodore and the Amiga technology. And it should be noted that the bidders understand that the value of the Amiga declines as time passes.

Let's take a closer look at some of what's going on in this bidding process. Though the rumors have been dense, the Bandito has managed to cut through the smoke and mirrors to get to some of the real information, as scarce as that may be.

First of all, who are the bidders? The exact list is a little hazy, but here's the best the Bandito could compile: Amstrad, Philips, Commodore UK, CEI, Jim Dionne's group and Samsung. There may be one or two others, but apparently they aren't as serious as these folks. So what do these companies want to do with Commodore, anyway?

Let's start with an interesting fact that may explain a lot to you. When the European Common Market was really set into place with the 1992 agreement, some loopholes were left in that agreement as part of the political quid-pro-quo that made the agreement possible at all. One of the nifty little gotchas in the EC agreement is this one: A grandfather clause that lets pre-existing offices of a multinational corporation get by with substantially lower duties. So buying up existing offices lets a company save a lot of money when importing product. Hence the interest among megacorps, even Sony, for Commodore's European assets. You see, Commodore has this terrific network of European sales offices, and if someone takes over Commodore, they now own those offices and so they can import products while paying substantially less in import duties. And if you're a big company like Samsung or Sony, the savings are in the many millions of dollars per year.

Supposedly the trustees have allowed more time for bids in the hopes that one of the other bidders will be able to raise more money. That's probably Jim Dionne's group, and maybe the Commodore UK folks (led by David Pleasance).. Makes you wonder how evenhanded the trustees are, or how desperate. Also makes you wonder how a bidder without enough ready cash to make a bid can hope to bring the Amiga back into production.

How much cash does it take to revive Amiga production? Well, estimates vary, but they are all in the \$20 to \$50 million dollar range. That's including what has to be paid for the rights and what it will take to do some production and some market-

# AGA+M2

## Enhanced !

### Workbench 3 and Updated Compiler

The Benchmark WB3 Interface provides complete Workbench 3.0 and 3.1 support, including AGA Support, AREXX, GadTools, BOOPSI, ASL, IFFParse, Example Programs, and an Updated Compiler.

Updated compiler features include 68020 code generation and direct support for IEEE single and double precision math.

Benchmark Modula-2 (including WB2 or WB3) sells for \$200. WB2 or WB3 is \$125. WB3 upgrade from WB2 is only \$25. Shipping is extra. Please contact us for exact charges.

We're offering special discounts on upgrades to Benchmark for other Modula-2 users. Call or write for our free catalog.

Money-back guarantee on all Armadillo Computing products.

### Armadillo Computing

5225 Marymount Drive, Austin, Texas 78723

Phone/Fax: 01-512/926-0360 Internet: jolinger@bix.com

**Still Supporting the Amiga!**

## Scientific Amigan

From Aerospace Engineering to Zoology, **Scientific Amigan** provides articles and software to enhance research, analysis, and design with the Amiga.

- Expert columns and reviews
- Internet tips and sources
- Technical publishing
- Disk and reprint library
- Two library disks w/ subscription
- Sample issue \$2

**Annual Subscription: \$39 U.S.**  
**Add \$10 for Foreign Delivery**

**Dept. AZ**  
**POB 60685**  
**Savannah, GA 31420-0685**

Circle 112 on Reader Service card.

ing. No doubt there are other costs in there; certainly marketing alone could eat up a few tens of millions, if done properly. And then there's an engineering effort to develop the next Amigas, which would chew up another few tens of millions.

But that's OK, since several of the bidders have absolutely no interest in reviving Amiga production, according to the Bandito's sources. Amstrad, Philips, and Samsung are all just looking for various pieces of the corpse, and they have no intention of ever offering Amigas for sale again. If anything, Amstrad and Philips are looking to eliminate competition from Commodore, not compete against themselves.



As told by AC Tech #3.4 and Amiga World Aug. '93...

## One Company Still Supports The Amiga!

**T**his new package represents the fourth major upgraded release of F-Basic since 1988. Packed with new features, 5.0 is the fastest and fullest yet. The power of C with the friendliness of BASIC. Compatibility with all Amiga platforms through the 4000...compiled assembly object code with incredible execution times... features from all modern languages, an AREXX port, PAL and ECS/AGA chip set support...Free technical support... This is the FAST one you've read so much about!

# F-BASIC 5.0™

Supports DOS  
1.3, 2.0, 2.1 and 3.0

### F-BASIC 5.0™ System \$99.95

Includes Compiler, Linker, Integrated Editor Environment, User's Manual, & Sample Programs Disk.

### F-BASIC 5.0™ + SLDB System \$159.95

As above with Complete Source Level Debugger.

Available Only From: DELPHI NOETIC SYSTEMS, INC. (605) 348-0791

P.O. Box 7722 Rapid City, SD 57709-7722

Send Check or Money Order or Write For Info. Call With Credit Card or C.O.D.

Fax (605) 343-4728 Overseas Distributor Inquiries Welcome

## Signals From The Lifeboats

Here's some interesting tidbits emerging from the collapse of Commodore. Creditors are hoping to move bankruptcy proceedings to New York to take advantage of more liberal U.S. bankruptcy laws. The most interesting aspect is that whispers of mismanagement are being heard, and U.S. bankruptcy law allows courts to reverse management decisions taken up to a year previously. Which means that any hanky-panky with shifting or hiding assets, huge golden parachutes, and the like can be recovered or amended. This must have Mehdi Ali a bit nervous, which is why he rudely hung up on an inquiring reporter.

Major creditors are owed at least \$145 million, including \$28 million to Prudential, \$5 million to Anchor National Life Insurance of LA, and \$15 million to Daewoo. Purportedly Mehdi told Prudential and Daewoo that he had some deal cooking with a foreign investor, and that if they didn't rock the boat in New York Courts he could get them 50 cents on the dollar for their debt. When they tried to find out more details, Mehdi clammed up.

Of course, Ali is no longer "associated" with Commodore these days, so maybe the whole thing is moot.

Apparently, Commodore UK was the only Commodore division still making money when the company died, which may be an indication of why Commodore UK is interested in carrying on with the business. The only problem is that a UK-based Commodore may not do as good a job of marketing Amigas in the US as a US-based company would (we've seen how good the Bahamas-based Commodore did in US marketing). We'll just have to see what happens, though.

## Mutiny On The Bounty

For those of you who believe that Kennedy was assassinated by someone other than Oswald, here's a conspiracy theory for you: Putting Commodore into bankruptcy is all part of a slick plot to get rid of Commodore's debts while still maintaining the product line. How? Go into bankruptcy, then have a "front" group buy up the rights to the Amiga at fire sale prices. Who's behind the front group? Why,

good old Irv and cohorts. They begin to sell Amigas once more, this time without that little matter of \$300 million in debt.

This does happen, but the Bandito doesn't think it's likely in this case. Usually this sort of thing occurs with much smaller companies. Besides, who says Irv wants to keep doing this? And don't think for a minute that this sort of thing could be concealed forever. The news would leak out sooner or later, and you can bet the suppliers who were left holding the debt wouldn't want to do business with the people who caused that problem. No sirree. And the Amiga fans would be a mite put out, too. Still, it's an amusing and horrifying concept, isn't it?

## In Memoriam: Jay Miner

The Father of the Amiga, Jay Miner, passed away June 20, 1994, at the El Camino Hospital in Mountain View, California. The cause of death was heart failure due to kidney disease complications.

Jay was not only the inventive genius who designed the custom chips behind the Atari 800 and the Amiga, he also designed many more electronic devices, including a new pacemaker that allows the user to set their own heart rate (which allows them to participate in more strenuous activities once denied to them). Jay was not only a brilliant engineer, he was a kind, gentle and unassuming man who won the hearts of Amiga fans everywhere he went. Jay was continually amazed and impressed at what people had done with his creations, and he loved more than anything to see the joy people obtained from the Amiga.

We love you, Jay, for all the gifts that you have given to us, and all the fruits of your genius that you have shared with us. Rest in peace.

•AC•

## Pssst!

Become a professional tattletale. Send rumors, tidbits, and other gossip to:

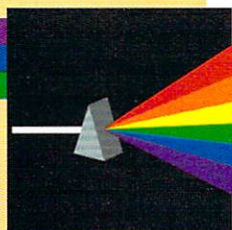
*The Bandito*  
c/o Amazing Computing  
P.O. Box 2140  
Fall River, MA 02722-2140



# STRENGTH IN NUMBERS

## GVP is the best Solution On any Amiga®

Great Valley Products has been the technological leader in Amiga peripheral and enhancement products since 1988. We consistently provide you with the best quality add-ons for the Amiga computer... bar none!



**EGS 28/24 SPECTRUM™** Go Beyond AGA Graphics with this real-time, 24-bit, true-color graphics enhancement card. Programmable resolutions up to 1600x1280! 800x600 in 24-bit! We include a custom display pass-through cable for single-monitor use. Many applications are ready-to-run and we include the acclaimed EGS Paint as a bonus too! Bring workstation graphic power to your Amiga today and see what you've been missing!



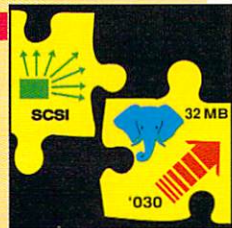
CIRCLE 329 ON READER SERVICE CARD



**TBC Plus™** This professional quality, all digital time-base corrector (TBC) uses state-of-the-art 8-bit 4:2:2 video signal processing... Plus it provides a real-time video frame-grabber and 16.7 million color frame-buffer... Plus there is a full SMPTE/EBU time-code receiver/generator... Plus this incredible product will transcode composite and Y/C inputs... Plus a 3 channel video input switcher (in composite and Y/C)... Plus programmable video special effects!



CIRCLE 330 ON READER SERVICE CARD



**Performance Series II™** At 50Mhz, you can own the fastest A1200 in the world! Add up to 32MB of high-speed 32-bit RAM, today! With the added power of a 50Mhz FPU, your floating point operations have never been speedier. A simple connection in the A1200's 'trapdoor' never voids a warranty, and with the Series II you have the added versatility of our custom option slot. Add the fastest SCSI interface on any A1200 with the A1291 SCSI Kit. It just plugs in from the back. Other expansion products coming soon!

CIRCLE 331 ON READER SERVICE CARD



**ImageFX™** Totally Integrated Image Processing. This is the only Image Processing package you will ever need. Period. This is the professional solution that brings you not only interchange between various image formats such as TIF and GIF and TARGA, but also a full-featured 24-bit, real-time paint and touch-up program. See the work you are doing *while you do it!* Edge feathering, Alpha channel, CMY/HSV/YUV/YIQ operations, integrated scanning, regionalized processing... It's *in* there!

CIRCLE 332 ON READER SERVICE CARD



**G-Lock™** Bring live video, audio and Amiga graphics together and do it on *any* Amiga! Get connected with the world of video with our built-in transcoder to convert input video to composite, Y/C, RGB or YUV outputs! Full support for AGA systems as well as the 'classic' Amiga 500, 2000 and 3000. Acclaimed interface controls make this easy to use and simple to control. *Scala™* users even get an EX module to use G-Lock in their multimedia applications. Add G-Lock's included dual-input audio panel and it's simply the best choice for every personal Amiga owner.

CIRCLE 333 ON READER SERVICE CARD



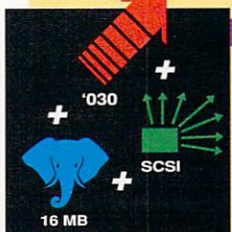
**IV-24™ 2.0 — The Ultimate Genlock** This is what you have been searching for in a professional quality genlock for your Amiga 2000, 3000 or 4000. This integrated hardware design provides the crispest, cleanest genlocked video on the Amiga desktop. With options for RGB, composite, SVHS, Betacam and M-II compatible inputs & outputs as well as a 24-bit, 16.7 million color frame-buffer and real-time framegrabber/digitizer, this is *the* Amiga genlock every professional needs. Powerful included software completes this picture as the Ultimate Genlock.

CIRCLE 334 ON READER SERVICE CARD

### G-Force '030 Combo™

GVP's classic Combo card accelerates your Amiga 2000 to new heights! This integrated design slips into the processor option slot in your system and instantly provides dramatic performance improvements. Easily add up to 16MB of fast 32-bit RAM. Gain expansion and versatility with our powerful SCSI II interface, allowing you to connect up to 7 devices such as hard drives, SyQuest removables or CD-ROM drives. Feel the power of G-Force today!

CIRCLE 335 ON READER SERVICE CARD

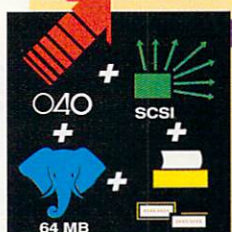


### G-FORCE™

#### G-Force '040/33 Combo™

The classic Combo taken to the Ultimate Extreme! Your applications will blaze with the awesome power of a 33Mhz 68040 processor. Give that muscle some room to flex with room for up to 64MB of fast 32-bit RAM. Of course our award-winning SCSI II interface is integrated for maximum performance and we include the bonus of ioExtender capability with an extra parallel port and a buffered high-speed serial port. Hot "toast" served here!

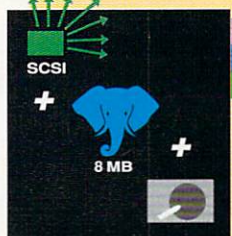
CIRCLE 336 ON READER SERVICE CARD



#### 4008 SCSI II™

Bring the world of SCSI within your reach with this easy-to-install board. Instantly gain access to thousands of peripherals such as hard drives, SyQuest removable media and CD-ROMs. Add up to 7 devices to your Amiga 4000 and smile. As a leader in Amiga peripheral technology since 1988, we still maintain support for A2000 owners too, even providing 8MB of RAM expansion on the card. Advanced surface-mount technology allows any user to mount a 3.5" drive directly to the card, providing for maximum convenience. Get the GVP SCSI difference!

CIRCLE 337 ON READER SERVICE CARD



#### ioExtender™

Feeling trapped? Let GVP extend your horizons with our easy-to-use ioExtender. Contained on a single card, you will find an additional parallel port, allowing you to connect a printer and a digitizer (such as DSS8+) at the same time. No more messy, unreliable switch boxes! We include two, that's right, two high-speed, FIFO buffered serial ports. No more dropped data or bogged-down computers when transferring data via modem (at speeds in excess of 57,600!). Free your ports and regain performance on your Amiga with ioExtender!

CIRCLE 338 ON READER SERVICE CARD



#### PhonePak VFX™ 2.0

If you are calling for VoiceMail Press 1. If you would like to send a Fax, Press 2. If you would like to have this automated, scheduled, time/date stamped and call you when you have new mail, get PhonePak VFX 2.0 today! Fully integrated, allowing unlimited mailboxes and private fax receiving. Send faxes from any program that prints. Call in remotely and retrieve faxes sent earlier. Plain paper or paperless faxing. Call routing with Centrex/PBX support, and more!

CIRCLE 339 ON READER SERVICE CARD



#### DSS8+™

Clearly Superior! This is the quietest, most professional and attractive digital sound sampler yet made. Assembled of high-impact clear polycarbonate, this is the sound sampler to own for the Amiga. The versatile Digital Sound Studio software includes a multifaceted program for sampling, editing, song composition, stereo sound playback as well as creation of .MOD format songs.

CIRCLE 340 ON READER SERVICE CARD



A 500  
A 600  
A 1200  
A 2000  
A 3000  
A 4000



GREAT VALLEY PRODUCTS, INC.  
657 CLARK AVENUE KING OF PRUSSIA, PA 19406 • USA  
PHONE 215•354•9495 • FAX 215•337•9922

EGS 28/24 Spectrum, Performance Series II, Image FX, G-Lock, IV-24, G-Force '030 Combo, G-Force '040/33 Combo, 4008 SCSI II, ioExtender, PhonePak VFX, and DSS8+ are trademarks of Great Valley Products, Inc. All other trademarks are the property of their respective owners.

Circle 105 on Reader Service card.



## BMD U.S.—Top 10 for July

### Top 10 CD<sup>32</sup> Titles

July	June	
1	3	Labyrinth of Time
2	8	Microcosm/Chaos Engine Combo
3	7	Pirates Gold
4	5	Gunship 2000 (New)
5	-	Fire and Ice
6	-	Heimdall2
7	-	Nick Faldo Golf
8	-	International Karate Champ
9	-	Brutal Sports Football
10	-	Whales Voyage

### Top 10 Amiga game Titles

July	June	
1	3	Frontier: Elite 2
2	-	Alien 3
3	8	Gunship 2000
4	4	Settlers
5	-	Oscar
6	-	Naughty Ones
7	-	Assasin Special Edition
8	-	Apocalypse
9	-	D/Generation
10	-	Disposable Hero

Titles are complements of British Magazine Dist. U.S.  
Pick them up at your local dealer or have them call.  
Dealer inquiries are welcome 412 962 6001.

## List of Advertisers

Please use a **FREE** AC Reader Service card to contact **ALL** advertisers who have sparked your interest. Amiga product developers want to hear from you! This is the best way they have of determining the Amiga community's interests and needs. Take a moment now to contact those companies featuring products you want to learn more about. And, if you decide to contact an advertiser directly, please tell them you saw their advertisement in *Amazing Computing*!

Advertiser	Page	Reader Service Number
AMIGA LIBRARY SERVICES	73	116
ARMADILLO COMPUTING	69	*
BRUCE SMITH BOOKS, LTD	CII	*
CREATIVE EQUIPMENT INTL.	5	102
COMPUTER ANSWERS	13	111
COMPUTER BASICS	40	101
COMPUTER BASICS	41	101
D.K.B. SOFTWARE	4	125
DELPHI NOETIC SYSTEMS	70	*
DIGITAL CREATIONS	CIII	109
DIGITAL CREATIONS	CIV	108
DIGITAL IMAGERY	9	*
GATEWAY AMIGA CLUB	54	*
GREAT VALLEY PRODUCTS	71	105
J&C COMPUTER REPAIR	68	165
LEGENDARY DESIGN TECHNOLOGIES	11	103
MYRIAD VISUAL ADVENTURES	61	115
NEURALINK	68	106
NOAHJI'S	7	107
NOVA DESIGN	1	104
OXXI, INC	51	159
SCIENTIFIC AMIGAN	69	112
THE VIDEO WORKS	58	110
WHITESTONE	68	148

\* This company wishes to be contacted directly.

## *Amazing Computing* & AC's *TECH* SUPER Back Issue SPECIALS!

While supplies last!

Order complete volumes of  
*Amazing Computing* and *AC's TECH* Back  
Issues at these incredible prices!

### ANY 12 BACK ISSUES

*Amazing Computing*:

**\$29.95**

**\$20!**

(\$25 Foreign)

(Includes shipping & handling)

### ANY 4 BACK ISSUES

*AC's TECH*:

**\$45.00**

**\$40!**

(Includes shipping & handling)

Don't miss out on this great offer!

# Call: 1-800-345-3360



# \$19.95 buys you hundreds of megabytes of great software for your Amiga

Amiga Library Services and Fred Fish offer you the best compilation of freely redistributable software money can buy!

Introducing **FreshFish™**, **FrozenFish™**, and **GoldFish™** from Amiga Library Services (ALS). This unique CD-ROM series offers Amiga users hundreds of megabytes of the very latest in freely redistributable software.

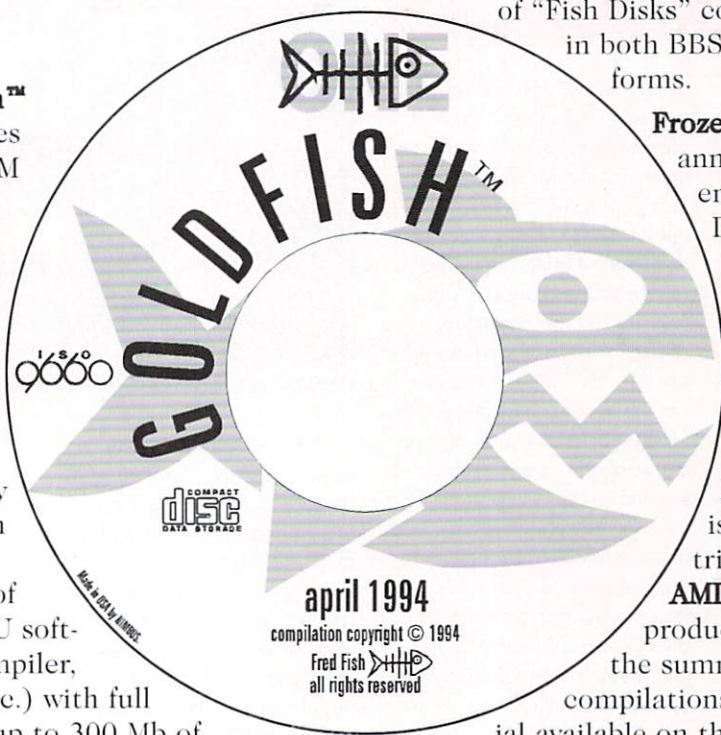
**FreshFish** CD's, published six times a year, are compilations of over 100 Mb of the newest material available in both BBS ready (archived) and ready-to-run (unarchived) form. Also included are over 200 Mb of the latest ready-to-run GNU software (EMACS, C/C++ compiler, text processing utilities, etc.) with full source code included and up to 300 Mb of other useful utilities, games, libraries, documentation and hardware/software reviews.

**GoldFish**, a two-disc CD-ROM set, contains the entire original 1,000 floppy-disk library created by ALS founder Fred Fish. This compilation of "Fish Disks" contains the entire library in both BBS ready and ready-to-run forms.

**FrozenFish**, offered on a bi-annual basis, contains the entire 1,000 floppy "Fish Disk" library in BBS ready (archived) form only. Also included are over 200 Mb of material from previously released FreshFish discs.

**NEW RELEASE:** ALS is happy to announce that it is now an authorized distributor of the "new"

**AMINET™** CD's. These CD's, produced quarterly starting in the summer of 1994, are archived compilations of the most recent material available on the Internet. Each disc will contain thousands of programs, demos, sound files, games, images, programming tools, etc.



YES! I want to take advantage of this great offer! Please ship me the following:

☐ FreshFish ☐ FrozenFish ☐ GoldFish ☐ AMINET™ Gold

Buy any single CD for \$19.95 • Buy any 2 CD's for \$35.95

Buy any 3 CD's for \$49.95 • Buy all 4 CD's for \$59.95

☐ 1 year subscription to FreshFish (6 CD's) for \$89.95

☐ 1 year subscription to AMINET (4 CD's) for \$59.95

Shipping & Handling: \$3.95 for each shipment up to 4 CD's • \$12.95 for 1 year subscriptions

Payment: ☐ VISA ☐ MasterCard ☐ C.O.D. ☐ Check or Money Order (U.S.) ☐ FED-X 2nd-Day Delivery add \$12.95 (U.S. only)

Card Number: \_\_\_\_\_ Exp.: \_\_\_\_\_ Signature: \_\_\_\_\_

Name: \_\_\_\_\_ Address: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_ Country: \_\_\_\_\_

**CALL TO ORDER**

**1.800.804.0833**

**FAX TO ORDER**

**1.602.917.0917**

**MAIL ORDERS TO:** Amiga Library Services • 610 N. Alma School Road • Suite 18 • Chandler, AZ 85224-3687 • USA



# DIVERSIONS

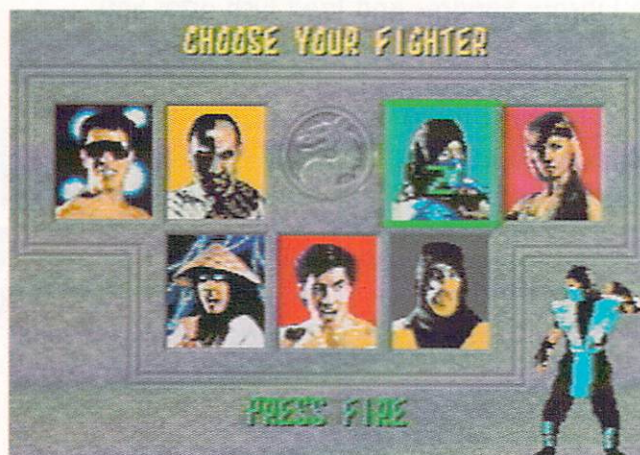
## Mortal Kombat

by Jeff James

The product that helped spawn recent concerns about overly violent video games, Acclaim's *Mortal Kombat*, has finally kicked, punched and bled its way onto the Amiga. With the help of Virgin games and Probe Software, the Amiga version of *Mortal Kombat* contains all the blood-spattering gore that made the game so popular in the arcade and on the Sega and Super Nintendo game systems.

Like many other beat 'em up games, *Mortal Kombat* pits the player against a plethora of on-screen opponents. Gameplay is against either another player or the computer, with the latter offering five levels of difficulty ranging from pushover (very easy) to impossible (very hard). Once you've selected your

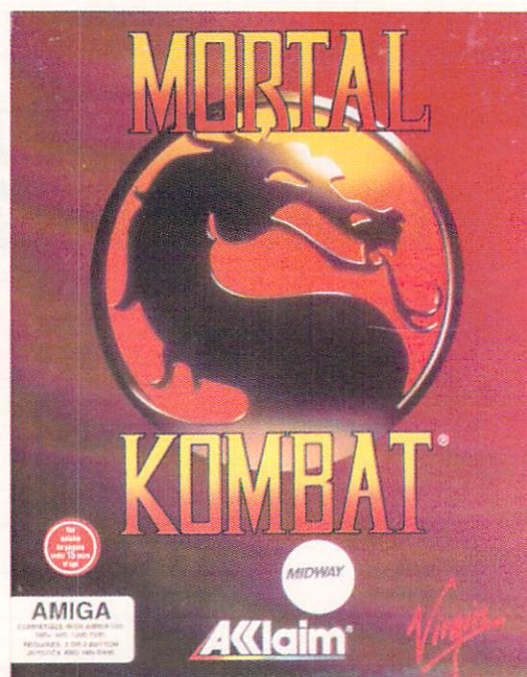
opponent and playing options, you're off to battle. Combat is viewed from the side, with your on-screen pugilist of choice facing off against your opponent, framed by an exotic background image of a statue-filled courtyard, throne room, or other suitable backdrop. Using a variety of joystick and fire button combinations, you can make your character punch, kick, jump, perform flying leaps and basically carom around the screen in a effort to pummel your foe into submission. If you manage to defeat enough opponents, you'll have the opportunity to face off against the evil sorcerer Shang Tsung and his slap-happy four-armed henchman, Goro.



Choose from seven characters, each with their own special moves.

You can choose from seven characters, ranging from the expected (Johnny Cage, a martial arts movie star) to the bizarre (such as Rayden, a thunder god). Each character has their own special moves, such as Sonya Blade's energy wave and Scorpion's foe-impaling harpoon. True to the original arcade version, each character also has a unique special move employed to

inflict a "fatality" on an opponent. Used when your foe has been beaten enough to barely remain standing, the fatalities exhibit the most violent side of *Mortal Kombat*. Depending on the character, the enemy may be decapitated, frozen, burnt, or meet any of more than a half-dozen grisly fates. Inflicting a fatality isn't a sure thing — each character has a set of secret joystick/fire



The thrill of victory is quickly replaced by another struggle as you meet your next opponent.





Mortal Kombat opponents are viewed (left and below) from the side. Each match is framed by an exotic background image of a statue-filled courtyard, throne room, or a number of other interesting backdrops.

button combinations that must be executed in order to inflict one, and the codes aren't listed in the manual. Sound effects are top-notch, with plenty of yelps, grunts and other visceral noises. The Mortal Kombat soundtrack features suitably grim and violent music to match the on-screen action, and

bloodier versions for the A1200 and CD32.

So what about the violence? If you're a concerned parent with young children, Mortal Kombat may be too gory for your taste. Except for the gruesome fatalities, however, Mortal Kombat isn't much more violent than any of the other

If you're a concerned parent with young children, Mortal Kombat may be too gory for your taste. Except for the gruesome fatalities, however, Mortal Kombat isn't much more violent than any of the other fighting games on the market.

digitized speech is used throughout the game. Graphics are also well-done, with each of the characters — digitized from real human actors — being distinct and easily identifiable.

As with most new game releases for the Amiga, hard drive installation is not supported, and both game diskettes are copy protected. If you have only one floppy drive, expect to swap disks several times during play. If you're serious about playing Mortal Kombat, you should definitely invest in another floppy drive — gameplay is much more enjoyable with two drives. The version I looked at was for all Amiga models, although Virgin is reportedly working on even

fighting games on the market. On its own merits, Mortal Kombat emerges as an excellent conversion of the arcade original and a solid — albeit a trifle bathetic — bash 'em up fighting game. If you're a fan of the original coin-op, Mortal Kombat demands a blood-soaked spot in your gaming library.

**Mortal Kombat**  
Retail Price: About \$50 U.S.  
Requirements: 1 MB RAM,  
joystick.  
Virgin Interactive/ Acclaim  
Entertainment  
338A Ladbroke Grove  
London W10 5AH  
United Kingdom  
Inquiry #207





# Digital World, InfoComm, and ShowBiz Expo

By Douglas J. Nakakihara



From top to bottom: A screen shot of an Alladin transition, the Fast Video Machine's interface, NewTek's new Flyer interface, and the "hidden" Amiga 4000 in use at the TAO booth.

Gawd! Three major trade shows all strategically scheduled during the same week in the Los Angeles area. And yes, I was crazy enough to trek out and see each one. I was happy to see that the Amiga still had a presence, albeit minor, at two of the three shows. Here's a rundown on things of interest to Amiga owners.

## Digital World

Digital World's emphasis is on cutting edge digital products. Video, being inherently analog, was not much of a focus for this show, somewhat explaining the absence of any Amigas. CD-ROM was a big thing here. Thomas Dolby and Peter Gabriel were there showing their interactive CD-ROM products. Companies were also showing stuff from David Bowie and the guy-who-used-to-be-called-Prince. Creative people like these should bring some much needed life into interactive CD titles. Current offerings in my opinion are all ultimately boring.

The show was decidedly Mac-slanted for some reason. Apple, Radius, SuperMac, etc. were all showing their latest and greatest things for the Mac. Very impressive stuff indeed, but not priced for the average consumer's pocketbook. IBM had a booth there, but it was severely out-classed by the Mac-based things being shown. However, this is not to say that there aren't some equally cool things being done on the PC, IBM just wasn't showing them.

## SourPC

I got a first hand look at the PowerMac and a makeshift PowerPC-powered box running Windows NT. The first thing I noticed was that even running native applications, these state-of-the-art machines do not appear very fast. Internal floating point calculations were quick to be sure, but they really need to work on video display speed. It's kind of like a 500 horsepower engine in a car that only goes 55 m.p.h..

I also saw the Windows emulation on the PowerMac. Forget it. It is not for serious work. The Apply rep was even trying to convince people that it's real purpose was for sharing data files between the two

platforms. The sluggish performance is perfectly understandable since Windows is not really that fast on a 486 PC.

## Missing Link

The only link to the Amiga to be found was none other than good old John DiLullo. John is now Director of Marketing for Sigma Designs. They were one of the few companies showing anything close to being interesting for the PC. Their product ReelMagic is an MPEG playback card for the PC. They were showing it playing some CD-I Digital Videos. The only real downside of the card is that it only does 15-bit color.

With the Flyer just around the corner, big fast hard drives will be on the shopping list for many Amiga owners. Micropolis was showing their new model 1991 9.1 gigabyte 5.25-inch full-height SCSI hard drive. It is suppose to carry a street price of around \$4,500—that's 50 cents a megabyte!

Another new storage product was Pinnacle Micro's \$15,000 optical disk array. They have been able to overcome the inherently slow magneto-optical disk drive performance by running four drives in parallel. Their product can store 5.2GB of data and is capable of 6.4MB/sec data transfer rates, which should be good enough for most digital video applications. The benefit of this product is that the media is removable and a set of disks only costs about \$800.

## InfoComm

InfoComm was more of a consumer-based show and accordingly Windows PCs were everywhere. The real big thing at this show was TVs, TVs, and more TVs. CRTs, LCD, projectors, TV walls, you name it; it was there. Got a spare \$13,000? How about



a 42-inch Mitsubishi computer monitor for your Amiga? It even syncs down to 15.7 kHz! NTSC, PAL, SECAM, PC, and Mac video modes are supported. One projector I saw had a price tag of nearly \$60,000!

Everyone was touting their nonlinear editing products, but analog tape was still well represented. I had to search high and low through the four giant exhibit halls for any Amigas, but I did spot a few Amiga-based tape editing systems. I even spotted an A4000 quietly running an AGA Toaster effect in the Sanyo booth.

Feral Industries was showing "Feral Effect," a TBC/Synchronizer with interpolated video compression (\$1,495). This product will work in conjunction with the Toaster and compresses video both vertically and horizontally with minimal loss of picture quality. It is available in board or rack-mountable versions. The

The NewTek rep, James Herbert, also gave me a quick look at beta versions of ToasterPaint and ToasterCG. ToasterPaint was running full-screen HAM8 and had many very cool tools. It's been totally redone and looked fantastic. CG had some neat Postscript font manipulation features, like rotations and perspective. All I can say is "hurry up NewTek!"

The Raptor was also being demonstrated in the booth. This Lightwave rendering machine based on the MIPS R4400 RISC chip is in the biggest PC box I've ever seen—it's absolutely huge! This is the same chip used in SGI machines.

Raptor is really more like two separate computers in a single box, as opposed to a multiple-processor single computer. There are two drive controllers and two Ethernet cards in the Raptor, which runs Windows NT and uses NewTek's ScreamerNet

---

However, even with the new CPUs and all of the add-on hardware, the Amiga still represents the best price-for-performance platform.

---

output is very high quality and solves one of the biggest problems with Toaster effects.

The people at the Pinnacle booth were very unprofessional in promoting their Alladin video editing system. It wasn't enough that one of their reps was constantly bad mouthing the Toaster, but their pre-taped demo video had an actor alluding to competitors as he bit into an apparently stale piece of bread. C'mon guys, Alladin costs \$10,000. The 3D transitions are absolutely stunning, but it's not even in the same price range as the Toaster, and is not as full-featured.

### ShowBiz Expo

I finally reached nirvana at ShowBiz Expo (or was it exhaustion?). NewTek, sharing a booth with two local Amiga dealers, T. S. Computers and Century Systems, was showing the Flyer. I got a half-hour one-on-one demo of the product and it really looks fantastic.

I also found out that devices connected to the Flyer's SCSI controller will be available as normal Amiga devices. This means you can connect things like SCSI DAT drives and non-Flyer committed hard disks and use them for normal storage. Of course, volumes formatted for the Flyer will only be accessible by the Flyer.

software to network everything together. The ScreamerNet license is good for up to four Raptors (i.e., eight CPUs).

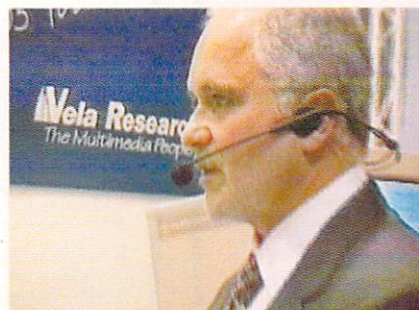
I really couldn't tell you how fast it was because I'm not sure how complex the scene being rendered was. I have been told that it will render frames about 16 to 24 times faster than an '040 A4000 and a usable configuration runs around \$16,000, if memory serves.

### PC Toaster

I also saw a pre-release nonlinear version of the PC-based Fast Video Machine. Price and performance is comparable to the Toaster, though Toaster's CG and Lightwave still put it ahead of this product. However, it is one of the few editing products that can mix an analog source with a digital one. It apparently doesn't care if the video is coming from a tape machine or hard disk; it treats them all the same. Additionally, it requires no TBCs.

There was tons of other stuff at the shows. However, even with the new CPUs and all of the add-on hardware, the Amiga still represents the best price-for-performance platform. Ask any developer who is trying to port their stuff over to Windows how great AmigaDOS is. These are crucial times for the Amiga right now, but I believe there is a light at the end of the tunnel.

•AC•



From top to bottom: John Dilullo is now Director of Marketing for Sigma Designs, Alladin's unprofessional "bite" at the Toaster, NewTek's Raptor at Showbiz Expo, Toaster effects at the Sanyo booth, and a view of the new ToasterPaint.



# AC's Back Issue Index

## Amazing Computing

Vol. 8, No. 10, October 1993

Highlights Include:

"**Making Waves**," Focus on the wave requester in Part IV of the Aladdin series, R. Shamm Mortier  
 "Clouds in Motion," Animated clouds in Scenery Animator, by R. Shamm Mortier  
 "Media Madness," Discover what it can do for Bars&Pipes, by Rick Manasa  
 "Bars&Pipes Professional 2.0," review by Rick Manasa  
 "Bernoulli MultiDisk 150", A review of this great Iomega drive.  
**ALSO:** Commodore's new CD32!

Vol. 8, No. 11, November 1993

Highlights Include:

"CanDo", This installment covers developing a custom object by combining several standard CanDo objects, by Randy Finch.  
 "Brilliance," A complete review of this hot new paint and animation program from Digital Creations, by Frank McMahon.  
 "Online," The introduction of this new telecommunications column for the Amiga, by Rob Hays.  
 "Get Graphic: Digital Image F/X," The introduction of AC's new graphics column, by William Frawley.  
 "Picasso II", A review of one of the best new graphics cards available, by Mark Ricken.  
**ALSO:** WOCA Pasadena: Commodore introduces CD-32! Plus, the incredible LightRave, a Video Toaster emulator!

Vol. 9, No. 1, January 1994

Highlights Include:

"Designing Holiday Cards", Using your favorite DTP programs to create holiday cards, by Dan Weiss.  
 "Accent on Multimedia," First in a series exploring the history and concepts behind multimedia, by R. Shamm Mortier.  
 "Primera Printer," Review of this low end, inexpensive color printer, by Merrill Callaway.  
 "Commodore 1942 Monitor," In-depth study of this comprehensive Amiga paint package, by R. Shamm Mortier.  
**ALSO:** Commodore Shareholders Movement

Vol. 9, No. 2, February 1994

Highlights Include:

"Amiga on Internet", Exploration of Internet and its services, by Henning Vahlenkamp.  
 "EGS 28/24 Spectrum," A review of this hot graphics card from GVP, by Mark Hoffman.  
 "Magic Lantern" A new animation compiling program for all Amiga display modes, by R. Shamm Mortier.  
 "Get Graphic: Digital Image F/X," Using AREXX, Opal Paint, ADPro, and DeluxePaint to process images, by William Frawley.  
**ALSO:** Exclusive interview with Lew Eggebrecht!

Vol. 9, No. 3, March 1994

Highlights Include:

"Amiga Stars at Medical Convention", Medical multimedia on the Amiga, by Michael Tobin, M.D.  
 "CanDo vs. HELM," Head-to-head review of two leading Amiga authoring systems, by Randy Finch.  
 "PD Update," This month, a description of AlertPatch 2.9 and other shareware and freeware utilities, by Henning Vahlenkamp.  
 "Scala MM300," A review of the program believed to be "hot stuff" for anyone doing interactive media work, by R. Shamm Mortier.  
**ALSO:** And furthermore: The Amiga takes the stage in the Broadway production of The Who's Tommy!

Vol. 9, No. 4, April 1994

Highlights Include:

"Computer Cafe Serves Up Shasta", The design team at Computer Cafe creates incredible "can-a-mation" for a beverage commercial, by Robert Van Buren.  
 "Aladdin 4D Review," Comprehensive look at the latest version of Aladdin, by R. Shamm Mortier.  
 "AGA Chipset and the Amiga: CD32 to the Rescue!" What does the future hold for CD32 and Amiga games? Jeff James has the inside scoop, by Jeff James.  
 "Sync Tips," Video returns to the pages of AC, featuring Oran Sands.  
**ALSO:** Exclusive interview with renowned Amiga artist Jim Sachs.

Vol. 9, No. 5, May 1994

Highlights Include:

"Desktop Publishing for Profit", Resume design: A simple and profitable way to break into the desktop publishing field, by Dan Weiss.  
 "24-bit Painting Techniques," Innovative tips and tricks anyone can use to make their computer paintings look better, by Mark Hoffman.

"PD Update," This month, MegaBall 3.0, Motorola Invaders, New World, and more, by Henning Vahlenkamp.

"MicroBotics MBX-1200Z," A review of this handy math coprocessor and 32-bit RAM add-on card for the Amiga 1200, by Rob Hays.  
**ALSO:** The long-awaited Amiga 4000 Tower is showcased at the Cebit show in Germany.

Vol. 9, No. 6, June 1994

Highlights Include:

"CanDo," Select, enter, and play music files, by Randy Finch.  
 "NAB show report," AC travels to Las Vegas for the latest releases and announcements.  
 "Making an Article Database," Create a simple database to keep track of magazine articles using the HELM authoring system, by Doug Nakakihara.  
 "A Survival Guide to CD-ROM Part I," The first in a four part series designed to take the confusion out of CD-ROM devices, by Mark Ricken.  
 "Bubbles vs Heat," Fargo's Primera Color Printer & Canon's BJC-600, by Dwinn Craig.  
 "1994 Reader's Choice Awards Ballot".  
 "TypeSmith 2.0," Review, by Merrill Callaway.  
 "The A 64 Package 3.0," This new release brings quality C64 emulation to the Amiga, by Henning Vahlenkamp.  
 "MIDIquest 4.5 & TECHquest," Review, by Shamm Mortier.

Vol. 9, No. 7, July 1994

"Accent on MultiMedia Part IV," This installment investigates the hardware end of the Amiga's involvement in MultiMedia by R. Shamm Mortier.

"1994 Reader's Choice Awards Ballot," Amazing Computing's 3rd annual Reader's Choice Awards. Cast a vote for your favorite product.  
 "Brilliance 2.0," A review of the latest update to Digital Creations' Brilliance/True-Brilliance by R. Shamm Mortier.

"Cocoon Morph," DevWare's Cocoon morphing program features motion morphing and more by R. Shamm Mortier.

"FinalWriter 2.0," New menu items including Undo/Redo, Font/Style Strip and faster graphics are covered in this upgrade review by Merrill Callaway.

"Digital Image Special F/X," Displaced Textures and other new operators found in ADPro 2.5 are explored in Part 9 in this series by William Frawley.

"New Products & Other Neat Stuff," Mr AMOS Club Programmers Pack, The DataFlyer SCSI+, Cinema 4D, DesktopMAGIC 2.0, DICE3.0, Alpha Paint, Sequel v1.2, Fury of the Furries, Super Methane Bros., Brutal Football, Fire & Ice round out the items found in this issue's New Products.

"Sync Tips," Video color correction with your Amiga by Oran Sands.

"Diversions," This month: Hired Guns from Psygnosis Ltd., Fighter Duel Pro 2 from Jaeger Software, and A-Train Construction Set from Maxis Software.

Vol. 9, No. 8, August 1994

Highlights Include:

"Teaching Writing with Scala MM300," The educational applications of Scala MM300 are explored by Charles F. Cavanaugh.  
 "Shielding Yourself For Sci-Fi," A tutorial on developing Sci-Fi shielding effects using Imagine and Aladdin 4D by Dave Matthews and Marc Hoffman.

"Digital Image F/X," OpalPaint tips and tricks by William Frawley.

"Batchers," A review of Amiga batching software for image processing by Shamm Mortier.

"CD", Nick Faldo's Championship Golf, Body Blows and Surf Ninjas bring the movie fun to CD.

Vol. 9, No. 9, September 1994

Highlights Include:

Reviews of "Toccata", "Snow Words and Nimble Numbers", "Amiga Oberon-2", "Take 2, Studio 16 3.0 and AD516 Board", and "Panorama 3.0".

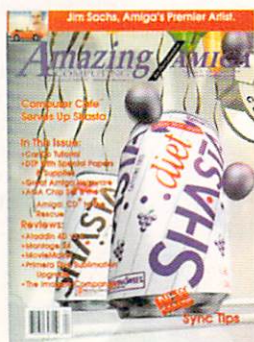
"A 2D Animation Project", How the concept of ANIMbrushes in DPaint helped produce an animation project by Shamm Mortier.  
 "Aladdin-4D: Tutorial #9", Instancing and CSpline variations are covered in this continuing Aladdin 4D tutorial by Shamm Mortier.

"AC Exclusive!" Commodore's U.K. General Manager, David Pleasance, shares his thoughts and hopes on his management buyout attempt for Commodore and the Amiga.

"Roomers", The Bandito discusses the CBM turmoil and the Amiga's future—Where we get upset and join in.

"Dragonworld", Hollywood generates computer images on a shoestring—Amiga style.

And much, much more.





# AC's TECH

AC's TECH, Vol. 3, No. 3

Highlights Include:

"Rexx Rainbow Library," A review by Merrill Callaway  
 "All You Ever Wanted to Know About Morphing," An in-depth look at morphing for Imagine by Bruno Costa and Lucia Darsa  
 "Custom 3D Graphics Package Part I," Designing a custom 3D graphics package by Laura Morisson.  
 "Build a Second Joystick Port," A simple hardware project for an additional joystick port by Jacques Halles.  
 AND LOTS MORE ON DISK!

AC's TECH, Vol. 3, No. 4

Highlights Include:

"Custom 3D Graphics Package Part II," Put the finishing touches on your own graphics package by Laura Morisson.  
 "TrueBASIC Input Mask," An interesting TrueBASIC utility by T. Darrell Westbrook.  
 "Time Efficient Animations," Make up for lost time with this great animation utility by Robert Galka.  
 "F-BASIC 5.0," A review of this latest version of F-BASIC by Jeff Stein.  
 PLUS: CD32 Development Info!

AC's TECH, Vol. 4, No. 1

Highlights Include:

"Artificial Life," Artificial life, intelligence and other technical tidbits in this piece, by John Iovine.  
 "Huge Numbers Part I," Creative number crunching, by Michael Griebling.  
 "Pseudo-random Number Generation," Generating sequences of random numbers—almost, by Christopher Jennings.  
 "Draw 5.0," Door prize selection in AMOS Professional, by T. Darrell Westbrook.  
 "Programming the Amiga in Assembly Language," Complex functions are explored, by William P. Nee.

"Writing a Function Genie for Pro Draw," Create a calendar beginning October 1582, by Keith D. Brown.

AC's TECH, Vol. 4, No. 2

Highlights Include:

"True F-BASIC," What do you get when you cross True BASIC with F-BASIC? You'll be surprised, by Roy M. Nuzzo.  
 "Huge Numbers Part II," Creative number crunching, by Michael Griebling.  
 "Building an Audio Digitizer," Create a simple audio digitizer for your Amiga, by John Iovine.  
 "A Look at Compression," Various compression techniques and what they do for you, by Dan Weiss.  
 "Programming the Amiga in Assembly Language," Using the math coprocessor, by William P. Nee.  
 "AmigaDOS Shared Libraries," Examining AmigaDOS libraries and their functions, by Daniel Stenberg.

AC's TECH, Vol. 4, No. 3

Highlights Include:

"Amiga  $\pi$ ," The program described in this article originally appeared as an Apple II Integer Basic listing in the magazine Micro in the late 1970s. Here it is, recycled as an Amiga program written in AMOS Basic by Robert Davis.  
 "Assembly Programming for the Next Generation of Amiga Computers," Taking advantage of the increased speeds of faster processors by Christopher Jennings.  
 "Huge Numbers Part 3," by Michael Griebling  
 "A Simple AmigaDOS Handler," by Stephen Rondeau  
 "A Pair of Pickovers," Two articles adapted for the Amiga from computer books by Clifford A. Pickover by Bill Nee.

# 1-800-345-3360



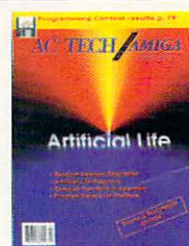
**BACK ISSUE SPECIALS!**  
**SEE PAGE 72 FOR DETAILS**

**Complete selection of Amazing Computing and AC's TECH AVAILABLE!**

**WHAT HAVE YOU BEEN MISSING?** Have you missed information on how to add ports to your Amiga for under \$70, how to work around *DeluxePaint*'s lack of HAM support, how to deal with service bureaus, or how to put your Super 8 films on video tape, along with Amiga graphics? Do you know the differences among the big three DTP programs for the Amiga? Does the ARexx interface still puzzle you? Do you know when it's better to use the CLI? Would you like to know how to go about publishing a newsletter? Do you take full advantage of your RAMdisk? Have you yet to install an IBM mouse to work with your bridgeboard? Do you know there's an alternative to high-cost word processors? Do you still struggle through your directories?

Or if you're a programmer or technical type, do you understand how to add 512K RAM to your 1MB A500 for a cost of only \$30? Or how to program the Amiga's GUI in C? Would you like the instructions for building your own variable rapid-fire joystick or a 246-grayscale SCSI interface for your Amiga? Do you use easy routines for performing floppy access without the aid of the operating system? How much do you really understand about ray tracing?

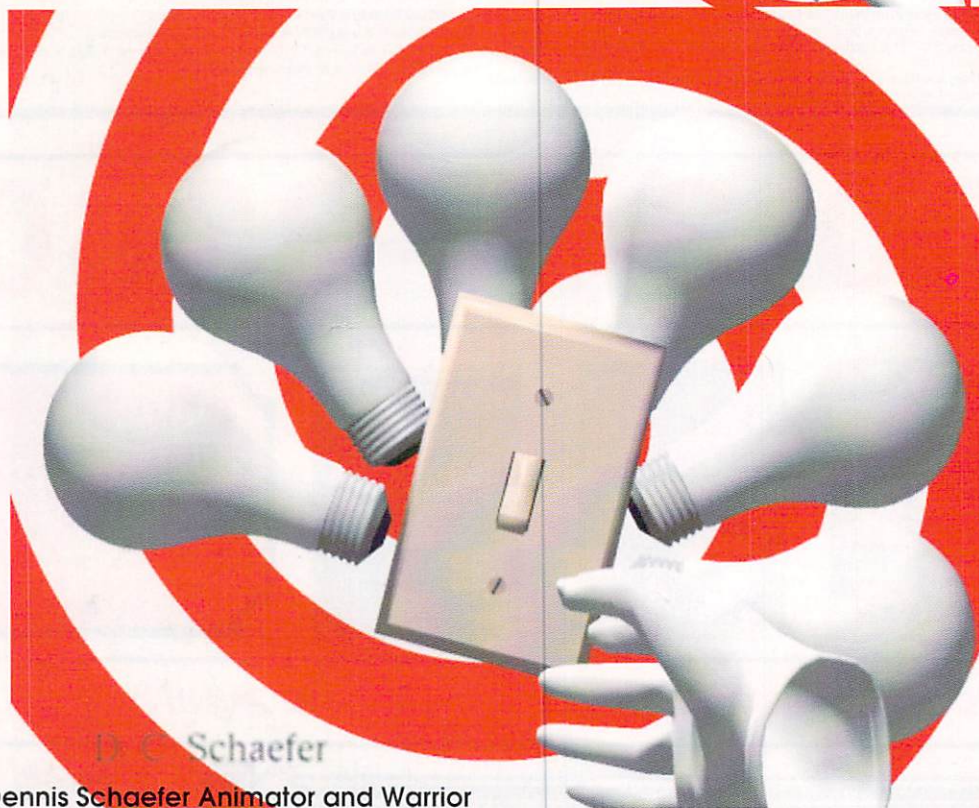
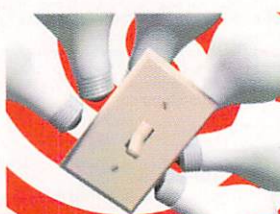
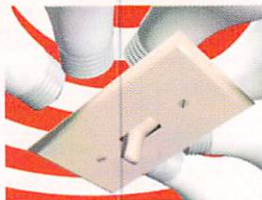
**The answers to these questions and others  
 can be found in  
 AMAZING COMPUTING and AC's TECH.**







# And furthermore...



D.C. Schaefer

## Dennis Schaefer Animator and Warrior

Dennis Schaefer writes, produces and edits some of the 10, 20 and 30-second commercials for NBC Burbank in the Net On-Air Promotion department. Recently NBC launched a new program where they wanted bright new logo entries into the evening prime time broadcasts. For their new series of NBC Peacocks, NBC hired famous artists and animators to design some new four and ten-second animated Peacocks as part of the new graphic look of the network. The new Peacocks were the first aspect of this new look, and, according to Mr. Schaefer, have been airing since last season. The new Peacocks were produced by artists such as Peter Max, Al Hirschfeld, and Dennis' favorite, John Kricfalusi, the creator of Ren and Stimpy.

One day while editing with the executive in charge of the project, Dennis saw some new ones. They were winners of a contest NBC had held for the Macintosh community exclusively. When he saw them he said, "These are pretty good, but I could do just as good on -my- computer."

The executive said, "Well, go ahead." So he did, and the network bought it (changing the original General Electric to General Electricity).

"It took me about three months to finish this project, not that it was that hard. I didn't work on it every day, mostly due to my habit of playing Air Warrior on GENie. (My handle there is "Bug",

plane number 2472. Say "hello" if you ever stop by there....)"

The animation was created using Imagine 2.0 and Essence on an Amiga 3000 equipped with an '040 processor. Frames were stored on Syquest removable hard-drive disks and delivered to a video post-production house equipped with a Toaster. The images were then transferred to BetaCam SP one frame at a time. The soundtrack was written to the finished animation (a process called "post-scoring") Dennis' co-worker Bruce Buehlman on his Macintosh-based home recording studio.

"This is my second animation to go out to videotape in this way," Dennis related, "My first was called *The Origin of Species* and was included in last year's "Amigamations" tape compiled by *AmigaWorld* magazine. That is the one involving a rather greedy hummingbird"

Dennis started his computer fixation with a Commodore 64 he purchased with money he made from working with ABC on the '84 L.A. Olympics. He bought a 300-baud modem shortly after that, and has been obsessed with telecommunicating ever since. At forty years old, Dennis has been married for 14 years to "the love of my life.... Phyllis." Phyllis Schaefer is a clothing designer in Los Angeles.

What's next? "I am currently getting shot down a lot in Air Warrior waiting for the next bolt of inspiration to strike."

•AC•



# Amazing/AMIGA FREE INFORMATION!

AC October 1994 valid until 11/30/94  
see page 72 for reference numbers

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ ST. \_\_\_\_\_ Zip \_\_\_\_\_  
Country \_\_\_\_\_

- A. Which of the following do you now own?  
(please check all that apply)  
O 1. Amiga 500 O 4. Amiga 1200  
O 2. Amiga 600 O 5. Amiga 2400  
O 3. Amiga 1000 O 6. Amiga 3000  
O 7. Amiga 4000 O 7. Amiga 4000
- B. If none of the above, which do you plan to buy soon?  
O 7. Amiga 4000 O 10. Amiga 1200  
O 8. Amiga 5000 O 11. Amiga 600  
O 9. Amiga 2000 O 12. Amiga 500
- C. Which Amiga hardware product do you plan to buy next?  
O 11. memory expansion O 15. modem  
O 12. hard drive O 16. music tool  
O 13. IBM emulators O 17. video product  
O 14. printer O 18. accelerator  
O 19. other (please specify): \_\_\_\_\_
- D. Which Amiga software product do you plan to buy next?  
O 20. C language O 27. spreadsheet  
O 21. Forth language O 28. database  
O 22. Modula-2 language O 29. financial  
O 23. Assembly language O 30. video  
O 24. BASIC language O 31. graphics  
O 25. entertainment O 32. music  
O 26. telecommunications O 33. other (please specify): \_\_\_\_\_
- E. How much money are you likely to spend on all Amiga product purchases this year?  
O 34. \$0-\$250 O 38. \$1501-\$2000  
O 35. \$251-\$500 O 39. \$2001-\$4000  
O 36. \$501-\$1000 O 40. over \$4000  
O 37. \$1001-\$1500
- F. Where do you buy Amiga products?  
O 41. local Amiga Dealer O 43. manufacturer  
O 42. discount department store O 44. mail order
- G. How many times have you purchased an Amiga product after seeing it in AC?  
O 45. frequently O 47. once  
O 46. occasionally O 48. never
- H. How did you obtain your copy of AC?  
O 49. subscribe (how long? \_\_\_\_\_ years)  
O 50. buy at local Amiga dealer  
O 51. buy at bookstore/newsstand/software store  
O 52. other: \_\_\_\_\_
- I. How many others not including yourself usually see or read your issue of AC each month?  
O 53. \_\_\_\_\_ others, in addition to myself
- J. How do you read AC each month? (please check one):  
O 54. read virtually everything, cover-to-cover  
O 55. scan through pages and read items of interest only  
O 56. check table of contents and maybe read 1-2 articles  
O 57. read my favorite column(s) only  
O 58. read very little of it
- K. Have you ever purchased a copy of AC's GUIDE?  
O 59. yes—but only once. O 61. no—but plan to soon.  
O 60. yes—two or more times. O 62. no—not interested.  
O 63. yes—I subscribe.
- L. Have you ever purchased a copy or subscribed to AC's TECH?  
O 59. yes—but only once. O 61. no—but plan to soon.  
O 60. yes—two or more times. O 62. no—not interested.  
O 63. yes—I subscribe.

101	102	103	104	105	221	222	223	224	225
106	107	108	109	110	226	227	228	229	230
111	112	113	114	115	231	232	233	234	235
116	117	118	119	120	236	237	238	239	240
121	122	123	124	125	241	242	243	244	245
126	127	128	129	130	246	247	248	249	250
131	132	133	134	135	251	252	253	254	255
136	137	138	139	140	256	257	258	259	260
141	142	143	144	145	261	262	263	264	265
146	147	148	149	150	266	267	268	269	270
151	152	153	154	155	271	272	273	274	275
156	157	158	159	160	276	277	278	279	280
161	162	163	164	165	281	282	283	284	285
166	167	168	169	170	286	287	288	289	290
171	172	173	174	175	291	292	293	294	295
176	177	178	179	180	296	297	298	299	300
181	182	183	184	185	301	302	303	304	305
186	187	188	189	190	306	307	308	309	310
191	192	193	194	195	311	312	313	314	315
196	197	198	199	200	316	317	318	319	320
201	202	203	204	205	321	322	323	324	325
206	207	208	209	210	326	327	328	329	330
211	212	213	214	215	331	332	333	334	335
216	217	218	219	220	336	337	338	339	340

# Amazing/AMIGA FREE INFORMATION!

AC October 1994 valid until 11/30/94  
see page 72 for reference numbers

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ ST. \_\_\_\_\_ Zip \_\_\_\_\_  
Country \_\_\_\_\_

- A. Which of the following do you now own?  
(please check all that apply)  
O 1. Amiga 500 O 4. Amiga 1200  
O 2. Amiga 600 O 5. Amiga 2400  
O 3. Amiga 1000 O 6. Amiga 3000  
O 7. Amiga 4000 O 7. Amiga 4000
- B. If none of the above, which do you plan to buy soon?  
O 7. Amiga 4000 O 10. Amiga 1200  
O 8. Amiga 5000 O 11. Amiga 600  
O 9. Amiga 2000 O 12. Amiga 500
- C. Which Amiga hardware product do you plan to buy next?  
O 11. memory expansion O 15. modem  
O 12. hard drive O 16. music tool  
O 13. IBM emulators O 17. video product  
O 14. printer O 18. accelerator  
O 19. other (please specify): \_\_\_\_\_
- D. Which Amiga software product do you plan to buy next?  
O 20. C language O 27. spreadsheet  
O 21. Forth language O 28. database  
O 22. Modula-2 language O 29. financial  
O 23. Assembly language O 30. video  
O 24. BASIC language O 31. graphics  
O 25. entertainment O 32. music  
O 26. telecommunications O 33. other (please specify): \_\_\_\_\_
- E. How much money are you likely to spend on all Amiga product purchases this year?  
O 34. \$0-\$250 O 38. \$1501-\$2000  
O 35. \$251-\$500 O 39. \$2001-\$4000  
O 36. \$501-\$1000 O 40. over \$4000  
O 37. \$1001-\$1500
- F. Where do you buy Amiga products?  
O 41. local Amiga Dealer O 43. manufacturer  
O 42. discount department store O 44. mail order
- G. How many times have you purchased an Amiga product after seeing it in AC?  
O 45. frequently O 47. once  
O 46. occasionally O 48. never
- H. How did you obtain your copy of AC?  
O 49. subscribe (how long? \_\_\_\_\_ years)  
O 50. buy at local Amiga dealer  
O 51. buy at bookstore/newsstand/software store  
O 52. other: \_\_\_\_\_
- I. How many others not including yourself usually see or read your issue of AC each month?  
O 53. \_\_\_\_\_ others, in addition to myself
- J. How do you read AC each month? (please check one):  
O 54. read virtually everything, cover-to-cover  
O 55. scan through pages and read items of interest only  
O 56. check table of contents and maybe read 1-2 articles  
O 57. read my favorite column(s) only  
O 58. read very little of it
- K. Have you ever purchased a copy of AC's GUIDE?  
O 59. yes—but only once. O 61. no—but plan to soon.  
O 60. yes—two or more times. O 62. no—not interested.  
O 63. yes—I subscribe.
- L. Have you ever purchased a copy or subscribed to AC's TECH?  
O 59. yes—but only once. O 61. no—but plan to soon.  
O 60. yes—two or more times. O 62. no—not interested.  
O 63. yes—I subscribe.

101	102	103	104	105	221	222	223	224	225
106	107	108	109	110	226	227	228	229	230
111	112	113	114	115	231	232	233	234	235
116	117	118	119	120	236	237	238	239	240
121	122	123	124	125	241	242	243	244	245
126	127	128	129	130	246	247	248	249	250
131	132	133	134	135	251	252	253	254	255
136	137	138	139	140	256	257	258	259	260
141	142	143	144	145	261	262	263	264	265
146	147	148	149	150	266	267	268	269	270
151	152	153	154	155	271	272	273	274	275
156	157	158	159	160	276	277	278	279	280
161	162	163	164	165	281	282	283	284	285
166	167	168	169	170	286	287	288	289	290
171	172	173	174	175	291	292	293	294	295
176	177	178	179	180	296	297	298	299	300
181	182	183	184	185	301	302	303	304	305
186	187	188	189	190	306	307	308	309	310
191	192	193	194	195	311	312	313	314	315
196	197	198	199	200	316	317	318	319	320
201	202	203	204	205	321	322	323	324	325
206	207	208	209	210	326	327	328	329	330
211	212	213	214	215	331	332	333	334	335
216	217	218	219	220	336	337	338	339	340

**YES!**

The "Amazing" AC publications give me 3 GREAT options to save! Please begin my subscription(s) immediately!

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_  
Charge my ☐ Visa ☐ MC # \_\_\_\_\_  
Expiration Date \_\_\_\_\_ Signature \_\_\_\_\_  
Please circle to indicate this is a New Subscription or a Renewal

1 year of AC	12 big issues of Amazing Computing!	US \$27.00 <input type="checkbox"/>
		Canada/Mexico \$34.00 <input type="checkbox"/>
		Foreign Surface \$44.00 <input type="checkbox"/>
1-year SuperSub	AC + AC's GUIDE = 14 issues total!	US \$37.00 <input type="checkbox"/>
		Canada/Mexico \$54.00 <input type="checkbox"/>
		Foreign Surface \$64.00 <input type="checkbox"/>
1 year of AC's TECH	4 big issues! The #1 Tech Resource	US \$43.95 <input type="checkbox"/>
		Canada/Mexico \$47.95 <input type="checkbox"/>
		Foreign Surface \$51.95 <input type="checkbox"/>

Please call for all other Canada/Mexico/foreign surface & Air Mail rates.  
Check or money order payments must be in US funds drawn on a US bank; subject to applicable sales tax.

DISCOVER

MasterCard

VISA





NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**

FIRST CLASS MAIL PERMIT NO. 36 FALL RIVER, MA

Postage Will Be Paid By Addressee

**Amazing** / **AMIGA**  
COMPUTING

P.O. Box 2140  
Fall River, MA 02722-9969



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**

FIRST CLASS MAIL PERMIT NO. 36 FALL RIVER, MA

Postage Will Be Paid By Addressee

**Amazing** / **AMIGA**  
COMPUTING

P.O. Box 2140  
Fall River, MA 02722-9969



**Please return to:**

**Amazing** / **AMIGA**  
COMPUTING  
Your Original AMIGA® Monthly Resource

P.O. Box 2140  
Fall River, MA 02722-2140

Please place this order form in an envelope  
with your check or money order.



**YES!** The "Amazing" AC publications give me 3 GREAT reasons to save!

Please begin the subscription(s) indicated below immediately!

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Charge my Visa MC # \_\_\_\_\_

Expiration Date \_\_\_\_\_ Signature \_\_\_\_\_

Please circle to indicate this is a **New Subscription** or a **Renewal**



DISCOVER

Call now and use your Visa, Master Card, or Discover or fill out and send in this order form!

1 year of AC	<b>12 big issues of Amazing Computing!</b> Save over 43% off the cover price!	US \$27.00 <input type="checkbox"/> Canada/Mexico \$34.00 <input type="checkbox"/> Foreign Surface \$44.00 <input type="checkbox"/>
1-year SuperSub	<b>AC + AC's GUIDE—14 issues total!</b> Save more than 45% off the cover prices!	US \$37.00 <input type="checkbox"/> Canada/Mexico \$54.00 <input type="checkbox"/> Foreign Surface \$64.00 <input type="checkbox"/>
1 year of AC's TECH	<b>4 big issues of the FIRST Amiga technical magazine with Disk!</b>	US \$43.95 <input type="checkbox"/> Canada/Mexico \$47.95 <input type="checkbox"/> Foreign Surface \$51.95 <input type="checkbox"/>

Please call for all other Canada/Mexico/foreign Air Mail rates.

Check or money order payments must be in US funds drawn on a US bank; subject to applicable sales tax.



**SUBSCRIBE!**

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

CHARGE MY: ☐ VISA ☐ M/C # \_\_\_\_\_

EXPIRATION DATE \_\_\_\_\_ SIGNATURE \_\_\_\_\_



DISCOVER

**Amazing Computing Back Issues:** \$5.00 each US, \$6.00 each Canada and Mexico, \$7.00 each Foreign Surface. Please list issue(s) \_\_\_\_\_

**Amazing Computing Back Issue Volumes:**

Volume 1-\$15.00\* Volume 2, 3, 4, 5, 6, 7, or 8—\$20.00\* each or any 12 issues for \$20.00\*

\* All prices now include shipping & handling. \* Foreign surface: \$25. Air mail rates available.

**AC's TECH/AMIGA**

Single issues just \$14.95! V1.1 (PREMIERE), V1.2, V1.3, V1.4, V2.1, V2.2, V2.3, V2.4, V3.1, V3.2, V3.3, V3.4, V4.1 V4.2

Volume One, Two, or Three (complete) or any four issues—\$40.00!

**Freely Distributable Software – Subscriber Special (yes, even the new ones!)**

1 to 9 disks	\$6.00 each
10 to 49 disks	\$5.00 each
50 to 99 disks	\$4.00 each
100 or more disks	\$3.00 each

\$7.00 each for non subscribers

(three disk minimum on all foreign orders)

**Amazing on Disk:**

AC#1 ...Source & Listings V3.8 & V3.9	AC#2 ...Source & Listings V4.3 & V4.4
AC#3 ...Source & Listings V4.5 & V4.6	AC#4 ...Source & Listings V4.7 & V4.8
AC#5 ...Source & Listings V4.9	AC#6 ...Source & Listings V4.10 & V4.11
AC#7 ...Source & Listings V4.12 & V5.1	AC#8 ...Source & Listings V5.2 & 5.3
AC#9 ...Source & Listings V5.4 & V5.5	AC#10 ...Source & Listings V5.6 & 5.7
AC#11 ...Source & Listings V5.8, 5.9 & 5.10	AC#12 ...Source & Listings V5.11, 5.12 & 6.1
AC#13 ...Source & Listings V6.2 & 6.3	AC#14 ...Source & Listings V6.4, & 6.5
AC#15 ...Source & Listings V6.6, 6.7, 6.8, & 6.9	

Back Issues:

\$ \_\_\_\_\_

AC's TECH:

\$ \_\_\_\_\_

PDS Disks:

\$ \_\_\_\_\_

Total: \$ \_\_\_\_\_

(subject to applicable sales tax)

Please list your Freely Redistributable Software selections below:

AC Disks \_\_\_\_\_

(numbers 1 through 15)

AMICUS \_\_\_\_\_

(numbers 1 through 26)

Fred Fish Disks \_\_\_\_\_

(numbers 1 through 1000)

**Complete Today, or telephone  
1-800-345-3360 now!**

**You may FAX your order to 1-508-675-6002**

Please allow 4 to 6 weeks for delivery of subscriptions in US.

(Domestic and Foreign air mail rates available on request)

Check or money order payments must be in US funds drawn on a US bank; subject to applicable sales tax.



**ORDER!**



Please return to:

***Amazing*** COMPUTING™ ***AMIGA***  
For The Commodore

**P.O. Box 2140**

**Fall River, MA 02722-2140**

Please place order form in an envelope with your check or money order

Please return to:

***Amazing*** COMPUTING™ ***AMIGA***  
For The Commodore

**P.O. Box 2140**

**Fall River, MA 02722-2140**

Please place order form in an envelope with your check or money order

***Amazing Computing for the Commodore Amiga—  
Your original monthly Amiga resource!***





## STILL THE BEST GRAPHIC BUY!

Create spectacular true color animations on your Amiga.

Paint, digitize and display beautiful full color composite video images on any Amiga. • Capture an image in 10 seconds from any color video camera or stable video source. • Full-featured paint, digitize and conversion software included. • Compatible with AGA 1200 and 4000 Amigas in NTSC/PAL modes. Two to four times the speed of AGA animations (DCTV vs. HAM8) with greater color and resolution.

Compatible with all popular 3D, rendering, and graphics packages including: AD-Pro, Aladdin 4D, AmigaVision, Brilliance, Calligari, Cinemorph, Draw4D, ImageMaster, Imagine, LightWave, MorphPlus, Real 3D, Scala, Scenery Animator, Sculpt, VistaPro, and many others...

**DCTV (NTSC or PAL)**  
**\$299.00**

## RGB CONVERTER

Allows the use of DCTV with standard RGB monitors (1084) in standard NTSC or PAL modes. Also permits the use of external genlocks like our SuperGen.

**RGB Converter**  
**\$199.00**

**NEW!**

## SuperGen SX

### S-VIDEO AND COMPOSITE GENLOCK & OVERLAY SYSTEMS

SuperGen SX

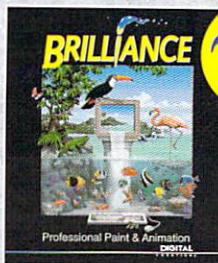
- Only broadcast quality S-Video genlock for less than \$1000
- AGA compatible. Compatible with all Amiga models
- Two independent dissolve controls
- Software controllable
- Notch filter

**SuperGen SX**  
**\$749.00**

SuperGen 2000S

- Broadcast Quality
- For A2000 only - internal
- Built-in Proc-amp
- S-Video and Composite Input & Output

**SuperGen 2000S**  
**\$1195.00**



**2.0**

## ANNOUNCING BRILLIANCE VERSION 2.0

Version 2.0 of Brilliance has been designed with productivity in mind. Several new features enhance this already powerful program. Features like *Flip Frames* that allows the animator to flip through drawings. *Rub Thru* that makes compositing easier. *Load and Save Tween* paths enabling much longer and repeatable brush moves. Faster and more accurate Tweening. *True View* option for magnification. And much, much more.

**Brilliance!**

*The best just got better!*

**NOW!**  
**Without**  
**Copy**  
**Protection**

**NOW!**

**HOT NEW PRICE**

**Brilliance 2.0**  
**\$99.00**

**Upgrade 1.0 to 2.0**  
**\$49.00**

## The Kitchen Sync



The Kitchen Sync provides two channels of time base correction - the perfect low cost TBC solution for the Video Toaster™.

With a Video Toaster, the Kitchen Sync provides a complete A/B roll editing system.

Two complete infinite window time base correctors on one IBM AT/Amiga compatible card • Absolute 100% broadcast quality • Composite or Y/C video in • Includes easy to use external control panel • No waveform monitor needed • Variable speed strobe • Freeze Frame, two rock-solid Freeze Fields • Low power consumption • Lowest TBC price per channel • Works with consumer grade VCRs

**Two Complete Time Base Correctors On One Card!**

**Kitchen Sync**  
**\$1295.00**

### Genlock Option

Required to synchronize the Kitchen Sync to an external video source.

**Genlock Option**  
**\$150.00**

### S-VHS Option

Required to enable S-VHS/Hi-8 (Y/C) video outputs.

**S-VHS Option**  
**\$150.00**



## Video Slot Box



**NEW!**

## INCREASE PRODUCTIVITY!

- Four Video Slots! • Three PC/AT bus slots (power & ground only) • 230W switching power supply • Two 5.25" drive bays • One 3.5" drive bay

The Video Slot Box is a revolutionary new mini-tower that expands any Amiga A2000, A3000, or A4000 to have four complete video slots, three additional PC AT bus slots (Power and Ground only) for compatible cards such as our Kitchen Sync TBC, room for two 5.25 inch half height devices and one 3.5 inch device (You can use this room for SCSI hard drives, optical drives, flopticals, tape drives, or anything else that fits.), and a beefy 230 watt switching power supply.

**The Video Slot Box provides these solutions:**

Use the Video Toaster with an Amiga A3000. Use more than one video slot product in your Amiga. Easily move your desktop video environment between Amigas.

The slots in the Video Slot Box are complete video slots with all the capabilities of the video slot within the Amiga. You can place up to four video slot products into the Video Slot Box. A front panel selector lets you choose which product is actually in control of the video slot within the Amiga.

With products that are "video slot masters" such as the Video Toaster or a genlock, only one of them can be active at a time. The video slot box allows you to easily switch instantly between several such products within one machine without having to ever swap boards. And switch them with software!

**Get The Most Out Of Your Amiga**  
**Video Slot Box**  
**\$995.00**

## FREE SHIPPING

**on all VISA & MC orders in the US.**

**COD - Cash only - add \$10.00.**

**Call by 2:00pm PST/5:00pm EST for same day shipping.**

**DIGITAL**



Worldwide Distributors and Dealers Wanted. Inquiries invited.

**CALL**

**DIGITAL**  
**DIRECT**

**916-DIGITAL**  
**916-344-4825**

**9:00am to 5:00pm PST M-F**

**For technical information call 916-344-4825**

**CREATIONS**

**P.O. Box 97, Folsom CA 95763-0097 • Phone 916-344-4825 • FAX 916-635-0475**

SuperGen SX, SuperGen2000s, DCTV, DCTV RGB Converter, Kitchen Sync, and Video Slot Box are trademarks of Digital Creations, Inc.

Video Toaster is a trademark of Newtek, Inc. IBM and IBM AT are registered trademarks of IBM, Inc. Amiga is a registered trademark of Commodore-Amiga, Inc.

Circle 108 on Reader Service card





# The Reviews are in...

"The program is so fast and flexible that it makes its Amiga predecessors feel like the old Doodle! program on the Commodore 64. Nothing out there can match its feature set, and it's the one paint program I've used that's so fast that it never gets in the way of your creativity."

**Amiga Computing,**  
October 1993 (UK)

"Brilliance is now — leaving DPaint trailing in its wake — the best art package available for the Amiga. It's very hard to express why I'm so taken by Brilliance, there's just a feeling of 'rightness' about the way that it works."

**C U Amiga,**  
October 1993 (UK)



"Excellent! Brilliance is loaded with useful drawing and animation features, but it's not just the sheer number of tools on offer that impresses. Two other big points arise. First, the program is very easy to use, thanks to its intuitive, flexible and well thought-out panel system. The second major factor is Brilliance's speed. Even in HAM-8 mode, everything zips along beautifully quickly."

**Amiga Format,**  
October 1993 (UK)

"Brilliance is user friendly, doing an excellent job with nearly every function and option that it offers..."

**AmigaWorld,**  
December 1993 (USA)

"It is solid as a rock. Never have I known a first version of any program stand up like this or be so perfectly polished."

**Amiga Shopper,**  
December 1993 (UK)

## ...Brilliance kicked Tut's Butt!



**COMPARE!** Deluxe Paint IV Vs. Brilliance

Overall Speed	Slow	Fast
Picture Size Limited By:		
Chip RAM	Yes	No
Total RAM	N/A	Yes
Number of Brushes	29	
Number of Anim Brushes	2	9
Number of Screens	2	Lots*
Levels of Undo	1	Lots*
Levels of Redo	1	Lots*
Load/Save Paths	Yes	Yes
Flip Frames	No	Yes
Realtime Preview Mode	No	Yes
Full Screen HAM Gradient Fill	Slow	Fast
Max # of Colors Gradient Fill	16	30,000
True 24 Bit Editing	No	Yes
Load DCTV Pics as HAM	No	Yes
Max Animation Speed	30fps	99fps
Ground-up Design for AGA	No	Yes
* Limited only by total RAM		

"For many years, DPaint ruled the roost when it came to supplying incredible graphics power at an affordable price, but no longer. Brilliance has assumed centre stage and is now the Amiga's number one art package."

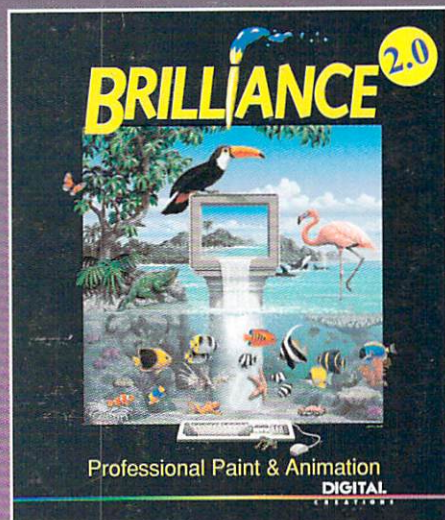
**C U Amiga,**  
January 1994 (UK)

"After using Brilliance for just a couple of days, I'm hooked. It is the only package to be released for the Amiga which can rival DeluxePaint for animation capabilities, and it is a class act."

**Amiga Down Under**  
Nov/Dec 1993  
(New Zealand)

"It took a while, but Deluxe Paint IV has finally met its match. If you're looking for the best AGA paint program on the Amiga, look no further than Brilliance."

**Amazing Computing,**  
November 1993 (USA)



## ANNOUNCING VERSION 2.0

Version 2.0 of Brilliance has been designed with productivity in mind. Several new features enhance this already powerful program. Features like *Flip Frames* that allows the animator to flip through drawings. *Rub Thru* that make compositing easier. *Load and Save Tween paths* enabling much longer and repeatable brush moves. Faster and more accurate Tweening. *True View* option for magnification. And much, much more.

**Brilliance!**  
*The best just got better!*

### Still Not Convinced?

30 Day Money Back Guarantee  
when purchased directly from  
Digital Creations as a Competitive  
Upgrade to Ver. 2.0.  
Call 800-645-1164 to order.

# DIGITAL

C R E A T I O N S